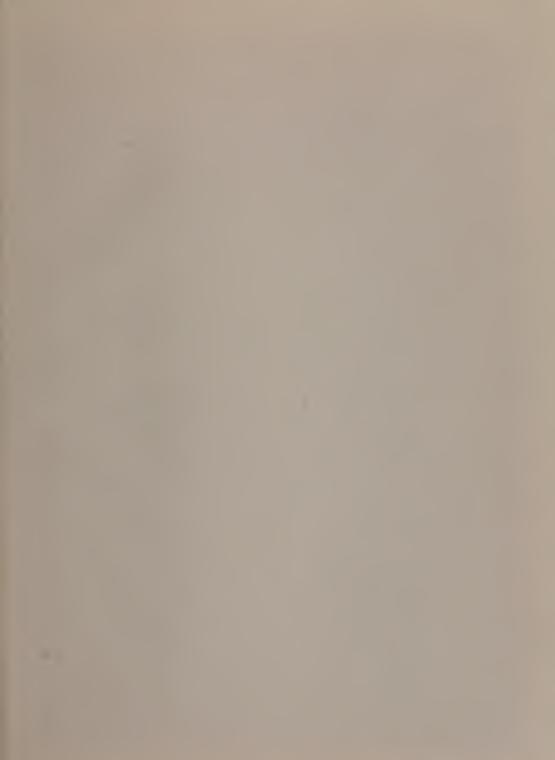
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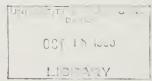
partment of Water Resources

BULLETIN No. 130-64

HYDROLOGIC DATA: 1964

Volume V: SOUTHERN CALIFORNIA

AUGUST 1966



HUGO FISHER

Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE

Director

Department of Water Resources



State of California THE RESOURCES AGENCY

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ORGANIZATION OF BULLETIN NO. 130 SERIES

Volume I - NORTH COASTAL AREA

Volume II - NORTHEASTERN CALIFORNIA

Volume III - CENTRAL COASTAL AREA

Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

Appendix A - CLIMATE

Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY



METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALI	ENT METRIC UNIT
Inch (in)	2.54	Centimeters
Foot (ft)	0.3048	Meter
Mile (mi)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal)	3.785	Liters
Acre foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liters per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute

FOREWORD

The Bulletin No. 130 series of reports is an integral part of the basic data program of the Department. This program has been designed to supplement the activities of other agencies by collecting data not available elsewhere and by publishing hydrologic data in a single series of publications.

This series of reports contains data on surface water, ground water, and climate previously published annually in Bulletins Nos. 23, 39, 65, 66, and 67. The series will be published annually in five volumes, each volume to report hydrologic data for one of five specific reporting areas of the State.

The collection and publication of data in this report is authorized by Sections 225, 226, 229, 230, 232, 345, 12609, and 12616 of the Water Code of the State of California

William E. Warne, Director Department of Water Resources The Resources Agency

State of California

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AC KNOWLEDGMENT

The Department of Water Resources gratefully acknowledges the assistance and contributions of the many public agencies, private organizations, and individuals whose cooperation has greatly facilitated the preparation of this bulletin. In this regard, special mention is made of the following:

California Disaster Office California Water Quality Control Board City of Long Beach, Department of Public Health City of Long Beach, Water Department City of Los Angeles, Department of Public Health City of Los Angeles, Department of Water and Power City of San Diego Coachella Valley County Water District Imperial Irrigation District Los Angeles County Flood Control District Orange County Flood Control District Riverside County Flood Control and Water Conservation District San Bernardino County Flood Control District San Bernardino Valley Water Conservation District San Luis Obispo County Flood Control and Water Conservation District The Metropolitan Water District of Southern California United States Army Corps of Engineers United States Geological Survey United States Weather Bureau United States Soil Conservation Service United States Public Health Service Ventura County Flood Control District

State of California The Resources Agency DEPARTMENT OF WATER RESOURCES

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ABSTRACT

Report contains data on precipitation, runoff, reservoir storage, and water imported to Southern California. Foldout plates show drainage province boundaries, locations of hydrologic areas within the drainage province, and lines of equal seasonal and mean precipitation.

HYDROLOGIC DATA: 1964, SOUTHERN CALIFORNIA

To meet the ever-increasing urban and agricultural requirements of Southern California demands the orderly development and protection of the area's water resources. These resources must, therefore, be measured and monitored regularly, and the results made public. The objective of the hydrologic data program of the Department of Water Resources is to provide information to meet this need.

Scope of Report

Hydrologic data are assembled in this bulletin to provide a useful source of information for all interested in development of the water resources of Southern California. Presented are data on precipitation, streamflow, reservoir storage, imported water, ground water, water quality, and artificial recharge of ground water basins.

Approximately 500 precipitation stations were selected as a source of information which would be representative of hydrologic conditions in the southern portion of the State. Preference was given to stations with the longest records. Precipitation data are collected from local agencies and records of the United States Weather Bureau. This report is the only publication of the data by hydrologic area, suitable for expeditious use in water resources analyses. Subsequent bulletins in this series are planned to also include evaporation, wind, temperature, and agroclimatic data with the precipitation data.

The records of daily mean discharge in this report are for stations in the vicinity of the State Water Project that were constructed and maintained by the Department of Water Resources. In addition, records

of seasonal runoff at 18 selected stations are presented to illustrate surface water conditions throughout Southern California. Another source of streamflow records is the United States Geological Survey's annual publication, "Surface Water Records of California."

Data on storage in surface reservoirs and imported water are collected from the various local agencies and compiled to depict water supply reserves.

The major portion of the ground water measurements in Southern California is obtained from local water agencies, with the Department of Water Resources acting as the collector and central compiling agency for these records. This bulletin publishes data for about 7,500 wells, of which only about 400 wells are routinely measured semiannually by the Department. The Department also collects ground water level information during special investigations conducted from time to time in various places throughout Southern California. All these records are published in the Bulletin No. 130 series for the appropriate year.

Water quality data for 52 surface water sampling stations in the Southern District were collected. The stations are a part of the statewide surface water quality data program.

Ground water quality data were collected by the Department and cooperating agencies for wells in the continuing ground water quality data program and from wells sampled for other programs and investigations. This ground water quality monitoring program identifies problems requiring additional study that are caused by saline-water intrusion, improper liquid waste disposal practices, improper well construction and abandonment, or repeated water use and reuse.

Prior Reports

Since 1930, many bulletins covering various aspects of the hydrology of Southern California have been published by the Department of Water Resources and its predecessor, the Division of Water Resources of the Department of Public Works. These bulletins include data on water use, ground water levels, quality of water, value and cost of water for irrigation, water losses and evaporation data, ground water geology, and evaluation of overdraft on ground water basins in Southern California.

The Bulletin No. 39 series, entitled "Water Supply Conditions in Southern California", was first published in 1932 as a part of the investigation initiated by Chapter 832, Statutes of 1929. Since then, water levels at selected wells have been published annually in Bulletins Nos. 39-A through 39-W, and Bulletins Nos. 39-56 through 39-62. Bulletin No. 39-56, the first of the numbered series, followed Bulletin No. 39-W without interruption in the annual continuity of data.

Bulletins Nos. 65 and 66 for Southern California were commenced for the 1955-56 period, and these reports have continued through the publication of Bulletin No. 65-61, Part II, dated January 1964, and Bulletin No. 66-60, Part II, dated April 1964.

These bulletins have been consolidated into the Bulletin No. 130 series, which enhances the value of these bulletins and considerably reduces the amount of time involved in consolidating hydrologic data by users. Furthermore, the Bulletin No. 130 series is a part of a standardized and coordinated reporting procedure for the State of California, which increases the availability of hydrologic data and provides an annual summary of hydrologic conditions.

In addition, reports on water conditions are prepared by the Department of Water Resources on the first of each month from February through May and again in October as part of the Bulletin No. 120 series. These reports contain forecasts of the runoff for the ensuing April through July snowmelt period. The May 1 report contains a section on ground water conditions as of the date of the report.

Organization of Report

Volume V of the Bulletin No. 130 series contains hydrologic data for Southern California. Volume V, Bulletin No. 130-64, is published under five covers. The first book contains the text and Appendixes A ("Climate") and B ("Surface Water Flow").

The second and third books are respectively, Appendix C, "Ground Water Measurements", Parts 1 and 2. Part 1 presents hydrologic data for the Central Coastal and Los Angeles Drainage Provinces. Part 2 presents hydrologic data for the Lahontan, Colorado River Basin, Santa Ana, and San Diego Drainage Provinces.

The fourth book contains Appendix D, "Surface Water Quality", and the fifth book, Appendix E, "Ground Water Quality".

APPENDIX A

CLIMATE



Introduction

The overall view of climatic conditions in Southern California is presented in Table A-1, which shows the 1963-64 seasonal precipitation and percent of the 50-year mean at selected stations.

Precipitation characteristics at four long-term stations are shown on Figures A-1 through A-4. Values of the cumulative monthly precipitation for a 50-year mean period and for 1963-64 at these four stations are included in Table A-2.

Plate 1, which is bound at the back of this book, contains lines of equal seasonal precipitation during 1963-64 and the 50-year mean precipitation for Southern California.

Seasonal precipitation during 1963-64 at approximately 500 selected stations in Southern California is presented in Table A-3. Stations which were representative of hydrologic areas were selected to give an accurate picture of climatic conditions.

Measurement Techniques

The Department cooperates with the U. S. Weather Bureau and local agencies in the collection of precipitation data. However, this collection is dependent, for the most part, on the cooperation of local observers, who measure the amount of precipitation that falls during a storm or a known period of time, usually 24 hours. Measurements in the precipitation gage are made with a calibrated ruler or read from a recorder chart and are generally accurate to ±0.01 inch.

For this report, these daily measurements were totaled from July 1963 to June 1964 and are presented in tables of seasonal precipitation in this appendix.

Coding

To facilitate processing of precipitation data, codes using numerals and letters designate hydrologic areas, agencies, and specific data. These codes are described in the following paragraphs.

Hydrologic Area Coding System

To provide uniform boundaries that are significant both geologically and hydrologically, the Department of Water Resources has developed an areal designation system. It relates areas that are interconnected hydrologically so the filing, separation, and recovery of data can be handled by machine. A further advantage of this coding system is that it can be used throughout the State. This system, as developed for Southern California, is described in an office report entitled "Names and Areal Code Numbers of Hydrologic Areas in the Southern District", dated April 1964.

The areal designation system for the Southern District covers a series of major drainage provinces which are further subdivided into hydrologic units, hydrologic subunits, and hydrologic subareas. Plates 2 through 7 show the locations and areal code numbers of the hydrologic subdivisions in each drainage province.

Precipitation Station Numbering System

In addition to the coding procedure to define areas of hydrologic significance, it is necessary to identify each item of hydrologic information with the particular numbering system in order to provide for filing and analysis. Precipitation stations are identified by latitude and longitude supplemented by the name of the station.

Agency Code

The agency code used in this report for precipitation data consists of four numerals for indicating the agency supplying the data. The agency codes and names used are given below:

Agency Code	Agency Name
1101	Los Angeles County Flood Control District
1200	Los Angeles City Department of Water and Power
2100	Ventura County Flood Control District
3200	San Bernardino City Water Department
4002	U. S. Army Corps of Engineers, Los Angeles
4004	U. S. Weather Bureau
4103	Riverside County Flood Control and Water Conservation District
4111	San Luis Obispo County Farm Agent
4701	Corona Foothill Mutual Lemon Company
4706	Fontana Union Water Company
4730	Crafton Orange Growers Association
4731	Garrett and Company
4732	Gold Buckle Association
4740	Southern California Edison Company
5100	San Bernardino County Flood Control District
5102	Orange County Flood Control District
5717	Temescal Water Company



DATA

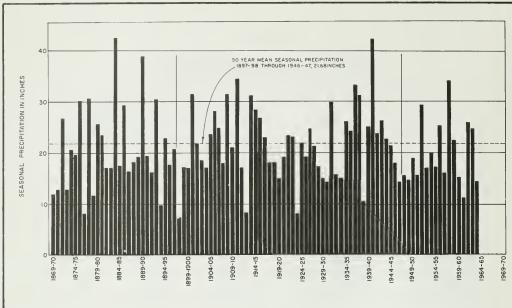
CLIMATE

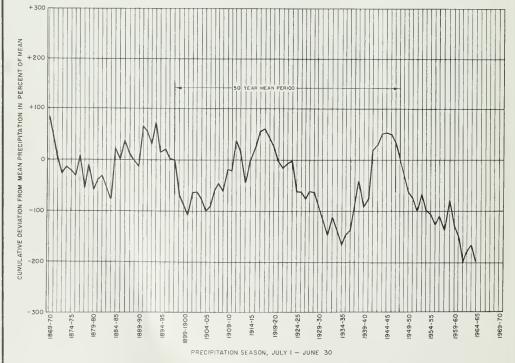


TABLE A-1

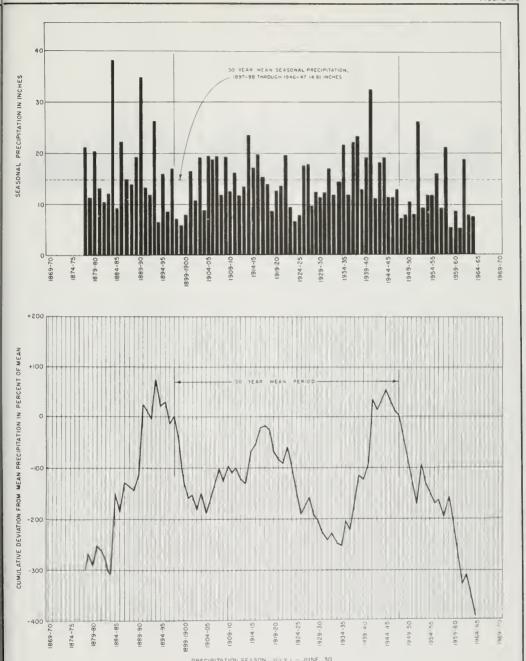
SEASONAL AND MEAN PRECIPITATION AT
SELECTED STATIONS IN SOUTHERN CALIFORNIA

Station	Country	50-year mean	1963-6 ¹	season
Station	County	1897-1947, in inches	In inches	:In percent : of mean
	Cos	stal		
Paso Robles San Luis Obispo Santa Maria Santa Barbara Ventura Los Angeles Pomona Santa Ana San Bernardino Oceanside San Diego	San Luis Obispo San Luis Obispo Santa Barbara Santa Barbara Ventura Los Angeles Los Angeles Orange San Bernardino San Diego San Diego	15.82 21.68 13.52 18.56 15.59 14.81 18.21 14.16 17.21 12.38 10.36	10.27 14.69 7.68 10.19 9.54 7.93 12.99 9.71 14.49 9.29 7.05	65 68 57 55 61 54 71 69 84 75
	Inte	rior		
Bishop Barstow Blythe Brawley	Inyo San Bernardino Riverside Imperial	6.14 4.17 4.03 2.40	3.07 3.54 5.88 2.53	50 85 146 105

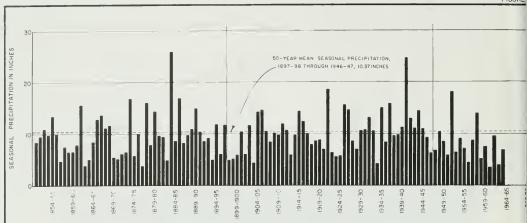




REPRESENTATIVE PRECIPITATION CHARACTERISTICS FOR SAN LUIS OBISPO

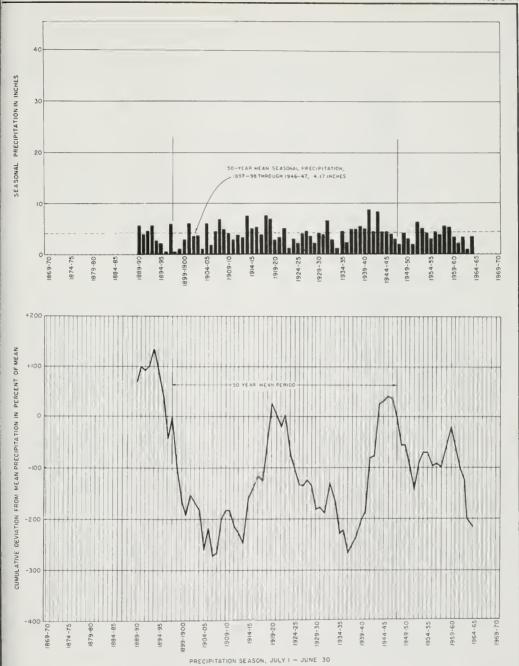


REPRESENTATIVE PRECIPITATION CHARACTERISTICS FOR LOS ANGELES





REPRESENTATIVE PRECIPITATION CHARACTERISTICS FOR SAN DIEGO



REPRESENTATIVE PRECIPITATION CHARACTERISTICS FOR BARSTOW

TABLE A-2

CUMULATIVE MONTHLY PRECIPITATION AT SAN LUIS OBISPO, LOS ANGELES, SAN DIEGO AND BARSTOW

	: Cumulative	re monthly	Cumulative monthly precipi-	: Cumulativ	ulative monthly preciptation at Los Angeles	Cumulative monthly precipi- tation at Los Angeles	: Cumulativ	nulative monthly pre- tation at San Diego	Cumulative monthly precipitation at San Diego	: Cumulati	lative monthly tation at Ba	Cumulative monthly precipi- tation at Barstow
Month	50-year	1963-6	1963-64 Season	50-year	1963-6	1963.64 Season	: 50-year :	1963-6	1963-64 Season	50-year	1963-6	1963-64 Season
	:1897-1947,: :in inches :	Ininches	: percent	1897-1947, in inches	In	percent of mean	:1897-1947,: :in inches :	inches	: percent	:1897-1947,: :in inches :	inches	: percent
July	0.01	0	0	0.01	0	0	0.03	0	0	0.15	0	0
August	0.05	0	0	0.03	0.02	29	60.0	0	0	0.41	0.32	78
September	0.28	0.19	89	0.31	1,33	429	0.23	1.90	956	0.58	1.90	328
October	1.09	2.13	195	06.0	1.90	211	61.0	2.03	257	0.87	2.71	311
November	2.76	6.22	225	1.96	4.05	207	1,61	3.88	241	1.16	3.19	275
December	95.9	6.37	76	94*4	4.05	91	3.59	3.98	Ħ	1.75	3.19	182
January	11.50	9.38	82	7.41	5.48	75	5.51	5.28	%	2.41	3.19	132
February	16.02	9.50	59	10.78	5.48	51	7.67	59.65	47	3.04	3.19	105
March	19,62	11.60	59	13.45	7.27	54	9.32	6.62	71	3.72	3.32	89
April	20.96	13.29	63	14.40	7.60	53	10.05	6.82	99	3.98	3.39	85
May	21.54	14.32	99	14.74	7.61	52	10,32	26.9	88	4.08	3.54	87
June	21,68	14.69	99	14.81	7.93	54	10.36	7.05	99	4.17	3.54	85

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME			
CENTRAL COASTAL DRAINAGE PROVINCE (T)									
		W 00	0.34	7 7					
		<u>T-09</u>	Salinas	Hydro Uni	<u>t</u>				
т-09.Н	35-19-42 35-22-27 35-21-59 35-32-06 35-32-56 35-37-40 35-40-42	120-29-19 120-38-07 120-38-16 120-36-41 120-42-21 120-41-03 120-38-14	1,350 1,153 1,250 1,150 800 700 803	13.08 19.99 19.97 7.82 11.27 10.27 8.33	4004 4004 4111 4111 4004 4004	Salinas Dam Santa Margarita Booster Santa Margarita 2SW Runitz Ranch Templeton Paso Robles Paso Robles Airport			
		T-10 San	Luis Obi	spo Hydro	Unit				
T-10.B	35-17-51 35-20-16	120-39-45 120-41-17	300 625	14.69 14.99	4004 4004	San Luis Obispo Poly Camp San Luis Obispo			
		T-11 Ca	rrizo Pla	in Hydro	Unit				
T-11.0	34-14-47 35-21-14 35-23-42	119-55-01 119-59-06 120-05-41	1,975 2,050 2,040	6.41 4.85 7.02	4111 4111 4111	Soda Lake (Werling) Carissa Plain (Beck) Carissa Plain (Cooper)			
		T-12 Sant	a Maria-C	uyama Hyd	ro Unit				
T-12.A	34-54-13	120-26-56	238	7.68	4004	Santa Maria Airport			
T-12.B	34-54-36	120-11-08	3,248	15.63	4002	Tepusquet Peak			
T-12.C	34-56-18	119-37-27	2,240	4.96	4004	Cuyama			
		<u>T-13</u> S	an Antoni	o Hydro U	Init				
T-13.0	34-44-38 34-45-47	120-16-53 120-25-30	565 320	10.57	4004 4004	Los Alamos Harris Gaging Station			
		<u>T-14</u>	Santa Yne	z Hydro U	Init				
T-14.A	34-39-42 34-35-20	120-28-32 120-29-40	72 1,000	9.77 15.82	4004 4002	Lompoc Sewage Plant San Miguelito Cn.			
T-14.C	34-32-00	120-10-30	680	15.01	4002	Nojaqui Park			
T-14.D	34-35-06	119-59-12	781	12.42	4004	Cachuma Dam			

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
		T-14 Santa Yr	ez Hydro	Unit (cor	ntinued)	
T-14.E	34-28-57 34-31-25 34-31-32	119-30-32 119-41-17 119-57-26	2,060 1,250 4,000	18.54 16.27 19.86	4004 4004 4004	Juncal Dam Gibralter Dam No. 2 Santa Barbara TV Peak
		<u>T-15</u> S	anta Barl	oara Hyd:	ro Unit	
T-15.A	34-26-57	120-28-15	110	11.51	4002	Point Conception
T-15.C	34-25-47 34-25-48 34-27-54	119-50-36 119-42-05 119-42-30	9 100 1,000	9.40 10.19 16.99	4004 4004 2100	Santa Barbara Airport Santa Barbara Doulton Tunnel

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME					
		LOS ANGELES	DRAINAGE	PROVINCE	E (U)						
	U-02 Ventura River Hydro Unit										
02.A	34-16-47	119-17-28	50	9.54	4004	Ventura-Star Free Press					
	34-20-35	119-17-43		10.37	2100	Kingston Reservoir					
	34-22-25	119-13-42	800	12.03	2100	Canada Larga-Barrett Rn.					
02.B	34-22-06	119-20-12	400	14.94	2100	Casitas Rn.					
	34-23-42	119-18-03	505	13.60	2100	Oakview F. S.					
	34-25-32	119-21-22		14.00	2100	Selby Rn. No. 1					
	34-25-51	119-18-53		13.50	2100	Rancho Matilija					
	34-28-55	119-17-30	875	15.44	4004	Wheeler Springs 2SSW					
02.C	34-24-44			15.83	2100	Meher MtSulpher Mt. Rd.					
	34-26-08		1,560	15.00	2100	Ventura Co. Fire StaOjai					
	34-26-09		1,250	14.81	2100	Dennison Rn.					
	34-26-52	119-14-33		13.59	4004	Ojai Thacher School					
	34-27-58	119-10-49	1,360	14.51	2100	Thacher School					
	<u>J</u>	J-03 Santa Cl	ara-Calle	guas Hyd:	ro Unit						
03.A	34-08-42	119-12-30	10	7.30	2100	Port Hueneme					
	34-09-26	119-04-39	20	6.58	2100	Davis Rn.					
	34-11-26	119-10-27	49	9.01	4004	Oxnard					
	34-12-17 34-16-40	119-04-04	60 300	7.44	2100	American Crystal Sugar Saticoy-Del Mar					
	34-16-47	119-15-27	200	9.71	2100	Borgstrom					
						0.11					
03.B	34-17-05	119-08-38	170	12.39	2100	Saticoy-Culbertson Limoneira Rn.					
	34-19-55 34-21-16	119-07-25 119-03-50	335 265	10.56	2100	Santa Paula-Ventura Co. F.D.					
	34-21-10	119-04-25	275	11.84	2100	Blanchard Inv. Co.					
	34-24-44		2,570	15.83	2100	Meher MtSulpher Mt. Rd.					
	34-26-08		1,560	15.00	2100	Ventura Co. Fire StaOjai					
03.C	34-21-54	118-56-42	400	11.98	2100	Barsdale-Young Rn.					
05.0	34-22-27	119-00-50	400	10.47	2100	Pine Tree Rn.					
	34-23-03	118-57-41	430	11.59	2100	Rancho Sespe					
	34-23-54	118-55-06	450	12.28	2100	Fillmore Citrus Assn.					
	34-24-10	118-55-34	435	12.04	4004	Fillmore IWNW					
	34-35-50	119-19-30	4,150	16.35	4004	Wheeler Springs 7N					
03.D	34-23-42	118-51-06	600	10.03	2100	Double H-N Rn.					
	34-24-08	118-44-10	675	10.54	2100	Newhall Rn.					
	34-24-22	118-45-22	730	9.44	2100	Camulos Rn. Qtrs.					
	34-24-39	118-47-37	700	10.40	2100	Piru Citrus Assn.					
	34-44-37 34-47-18	118-42-43 118-49-54	4,025 3,650	13.44	4004 1101	Sandbergs Quail Lake P.S. Gorman					
	24-41-TO	110-49-74	3,000	13.74	1101						

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	<u>U-03</u>	Santa Clara-Ca	lleguas	Hydro Uni	t (conti	nued)
U-03.E	34-21-24 34-22-46 34-23-07 34-23-27 34-23-27 34-25-21 34-26-36 34-27-02 34-27-51 34-28-55 34-29-31 34-30-47 34-30-50 34-35-14 34-35-20	118-39-42 118-09-03 118-31-54 118-04-50 118-17-12 118-34-26 118-26-06 118-04-00 118-11-52 118-09-25 118-31-32 118-8-29 118-16-30 118-21-31 118-14-10 118-31-27 118-21-45 118-27-10	2,850 5,600 1,243 4,950 4,450 1,096 1,625 4,500 2,550 2,900 1,511 3,135 2,920 2,350 3,250 1,580 3,050 2,100	9.64 18.67 9.34 12.06 13.42 6.24 7.99 9.98 7.52 6.51 8.26 5.78 7.01 8.57 10.24 10.87 12.60 12.69	1101 1101 1101 1101 1101 1101 1101 110	Santa Susanna MtSalt Cn. Little Gleason Newhall-Soledad Div. Hdqtr. Tujunga-Mill Cr. Sum. Magic Mtn. Saugus-Edison Substation Mint CnDyer Santiago Cn. Action-Camp No. 2 Action-Aliso CnBlum Rn. Dry Canyon Res. Vincent P. S. Action-Escondido Cn. Mint CnThe Oaks Action-Hubbard San Francisquito Cn. P.H. 2 Bouquet Cn. Saugus P. P.
	34-36-28 34-40-27	118-33-40	2,075	16.33	4004 4004	Elizabeth Lake Cn. Pine Cn. P. S.
U-03.F	34-10-43 34-11-46 34-14-10 34-14-52 34-15-44 34-15-47 34-16-08 34-16-42 34-17-45 34-17-53 34-18-58	118-50-59 118-56-05 118-56-01 118-50-26 118-39-32 118-59-46 119-02-04 118-52-34 118-52-34 118-53-36	810 850 275 680 1,075 300 375 520 720 1,080 851	9.39 8.25 9.68 9.59 10.38 8.40 10.43 9.32 10.61 7.15 10.77	4004 2100 2100 2100 4004 2100 2100 4004 2100 2100	Thousand Oaks-Conejo F. S. Newbury Park Acedemy Santa Rosa Valley-Janss Rn. Everett Rn. Susanna Knolls Somis-Snyder Rn. Somis-Aggen Rn. Moorpark ISSE Ven. Co. W. W. Dist. 1 Tapo (Mutual Valley) W. C. Kerr Bros.
		<u>U-04</u>	Malibu	Hydro Uni	t	
U-04.A	34-05-03	118-35-57	747	14.68	4004	Topanga Cn. R. S.
U-04.B	34-04-41 34-06-20 34-09-00	118-41-35 118-47-30 118-53-59	600 975 1,040	13.76 13.03 11.95	1101 1101 1101	Monte Nido Cn. Seminole Hot Springs Lake Sherwood Estates
U-04.C	34-01-10	118-47-46	115	9.28	1101	Zuma Cn. P. S.
U-04.D	34-04-38	118-52-47	1,530	12.58	4004	Lechuza P. S.
		<u>U-05</u> L. ASa	an Gabrie	l River H	ydro Uni	t
U-05.A	33-43-15 33-44-33	118-16-17 118-24-31	85 150	8.01 5.20	4004 1101	San Pedro Pt. Vicente L. H.

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

·····			1 5.50			
HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV.	PRECIP	AGENCY	STATION NAME
	U-05 L.	ASan Gabri	el River	Hydro Un	it (cont	inued)
U-05.A	33-46-06	118-11-28	150	7.74	1101	Long Beach Los Alamitos Ld.
	33-46-10	118-11-37	68	7.93	1101	Long Beach Vets Memorial
	33-46-30	118-22-58	1,240	8.02	1101	San Pedro Hills
	33-46-46	118-08-36	15	7.75	1101	Long Beach 10th-Roswell
	33-47-16	118-12-08	'n	7.35	1101	Long Beach-City Automatic
	33-47-27	118-15-30	40	8.03	1101	Wilmington-City Engr.
	33-47-31	118-10-13	40	6.09	1101	Long Beach-Hamilton Bowl
	33-47-49	118-10-03	140	7.65	4004	Signal Hill-City Hall
	33-47-58	118-23-29	216	5.69*	4004	Palos Verdes Estates
	33-48-38	118-04-38	23	7.44	1101	Los Alamitos
	33-49-52	118-19-41	85	6.96	4004	Torrance
	33-50-00	118-10-12	80	8.05* 6.18	1101 1101	Long Beach-Keever Ave.
	33-50-23	118-23-22	90 47	6.83	1101	Redondo Beach Lakewood-Montana Rn.
	33-50-35	118-07-09 118-04-58	47 52	7.92	1101	Artesia-Barr Lumber Co.
	33-51-48	118-19-55	65	7.55	1101	La Fresa Substation
	33-52-07 33-52-20	118-11-55	55	8.13	1101	Long Beach-Neece St.
	33-52-44	118-07-31	68	8.39	1101	Bellflower-McClurg
	33-53-00	118-23-19	182	6.98	1101	Manhattan Beach
	33-53-13	118-00-56	86	7.49	1101	La Mirada-Standard Oil
	33-53-30	118-09-36	70	8.27	1101	Paramount F. S.
	33-53-42	118-13-34	68	8.36	1101	Compton F. S.
	33-53-52	118-04-00	85	8.38	1101	Norwalk C. of C.
	33-54-57	118-25-50	150	7.44	1101	El Segundo-Standard Oil
	33-55-18	118-09-44	90	7.65	1101	Rancho Los Amigos
	33-56-18	118-08-03	130	8.17	4004	Downey F. D.
	33-56-56	118-15-17	121	8.29	1101	L. A96th-Central
	33-57-12	117-59-56	301	8.54	1101	East Whittier
(33-57-54	118-21-15	155	7.63	1101	Inglewood F. S.
8	33-58-27	118-01-57	340	9.39	4004	Whittier City Hall
	33-58-33	118-12-25	147	8.27	1101	Huntington Park City Yard
	33 -5 8 - 37	118-08-48	140	8.58	1101	Laguna Bell-S.C.E. Co. Venice F. S.
	33-59-21	118-27-15	55	8.89	4004	Santa Monica
	34-00-43	118-29-27	94	10.03 8.59	4004	Culver City
	34-01-00	118-23-17 118-18-46	75 203	8.58	1101	Clark Mem. Library
	34-02-00	118-27-08	232	9.13	1101	Sawtelle-West L. A.
	34-02-42	118-14-46	385	8.61	1101	L. A. W. D2nd-Hill
	34-03-08 34-03-09	118-14-13	300	8.57	1101	L. A. W. DDucommon St.
	34-03-19	118-14-26	548	7.93	4004	L. A. City
	34-03-19	118-27-22	355	8.69	1101	Sawtelle-Soldiers Home
	34-03-19	118-33-25	700	9.71	1101	Sa. Ynez CnPaseo Miramar
	34-03-50	118-21-29	175	8.84	1101	Hancock Park
	34-04-27	118-23-57	290	9.67	1101	Bev. Hills City Hall
	34-05-10	118-28-57	1.025	12.52	1101	Mt. St. Marys College
	34-05-11	118-26-45	540	10.50	4004	Stone CnBell Air Hotel
	34-05-19	118-17-34	335	9.01	1101	L. A. City College
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^{*}Partially estimated.

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	U-05 L.	ASan Gabr	iel River	Hydro Un	it (cont	inued)
U-05.A	34-06-21	118-27-13	865	12.38	1101	Stone Cn. Res.
	34-07-04	118-19-55	750	9.83	1101	Hollywood Dam
	34-07-06	118-10-39	620	9.94	1101	Highland Park-Lindsay
	34-07-14	118-24-38	867	11.17	1101	Upper Franklin Res.
	34-07-38	118-30-03	1,625	10.67*	1101	Mandeville CnFire Rd.
U-05.B	34-06-08	118-15-54	455	8.97	1101	Silver Lake Res.
	34-07-18	118-17-04	850	10.34	1101	Griffith Park Nursery
	34-07-32	118-16-58	900	9.53*	1101	Griffith Park Little Cn.
	34-07-45	118-24-20	1,100	11.06*	1101	Franklin Cn. Mulholland F.S
	34-07-51	118-29-26	1,425	10.76*	1101	Sepulveda CnF.S. #2
	34-07-52	118-28-42	1,325	9.78*	1101	Mulholland-Kirkman
	34-08-02	118-17-18	650	10.10*	1101	Griffith Park Zoo
	34-09-00	118-14-27	603	10.70	1101	Glendale-McIntyre
	34-09-02	118-10-57	950	8.17	1101	Eagle Rock Substation
	34-09-07	118-15-40	530	10.89	4004	Glendale-Stapenhorst
	34-09-21	118-18-20	470	11.27	1101	L. A. Headworks Plant
	34-09-23	118-21-56	593	9.70	1101	No. Hollywood-Blix
	34-09-24	118-38-14	924	11.63	1101	Calabasas-Farmer No. 2
	34-09-54	118-15-05	615	11.44	1101	Glendale-Jones N. 1
	34-10-02	118-28-06	680	9.12	4004	Sepulveda Dam
	34-10-	118-35-56	891	9.88*	1101	Girard-Brant Rn.
	34-10-55	118-08-15	1,125	13.79	4004	Altadena
	34-10-55	118-18-24	635	9.86	4004	Burbank Fire Dept.
	34-11-39	118-23-17	717	8.77	1101	Lankershim P.P.
	34-12-18	118-17-05	1,610	9.70	1101	Sunset Dam
	34-13-15	118-13-45	1,600	16.96	1101	Pickens Debris Basin
	34-13-28	118-14-24	1,565	16.94*	4004	La Crescenta FC 251
	34-13-34	118-36-58	865	8.90	1101	Chatsworth Res.
	34-13-52	118-28-04	828	9.68*	1101	Lindomar Nursery
	34-14-20	118-13-28	2,225	18.20	1101	Briggs Terrace
	34-15-21	118-24-24	955	10.06	1101	Pacoima-Warehouse
	34-15-23	118-36-19	957	10.63	4004	Chatsworth-LACFCD No. 24D
	34-15-43	118-23-50	1,110	10.43	1101	Hansen Dam
	34-15-50	118-16-13	2,450	14.27	4004	Haines CnLower
	34-16-18	118-15-07	3,450	16.06	4004	Haines CnUpper
	34-16-40	118-28-06		11.88	4004	~ *
	34-16-58		977			San Fernando
	·	118-30-46	1,150	12.13*	1101	Granada Pump Plant
	34-17-18	118-28-54	1,150	12.69	1101	Van Norman Lake
	34-17-31	118-11-15	2,315	17.42	4004	Big Tujunga Dam
	34-18-02	118-06-39	3,675	18.33	4004	Colbys FC 53D
	34-18-40	118-28-20	1,250	12.25*	1101	Sylmar Packing Corp.
	34-19-48	118-23-59	1,500	13.73	4004	Pacoima Dam FC 33AE
	34-20-18	118-36-44	3,340	13.08	1101	Sa. Susanna MtDevils Cn.
	34-21-18	118-27-02	3,175	17.88	1101	Wilson Cn.
	34-22-44	118-01-53	6,925	14.38	1101	Pacific Min.
	34-22-46	118-09-03	5,600	18.67*	1101	Little Gleason
	34-23-27	118-04-50	4,950	12.06*	1101	Tujunga-Mill Cr. Summit

^{*}Partially estimated.

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	U-5 L.	ASan Gabri	el River	Hydro Uni	t (conti	nued)
υ-05.C	34-07-41 34-08-14 34-08-54 34-09-27 34-09-27 34-10-11 34-10-25 34-10-34 34-10-57 34-11-03 34-11-36 34-11-52 34-12-10 34-12-12 34-12-27 34-12-30 34-12-33 34-13-40 34-13-40 34-14-40	118-06-40 118-07-25 118-08-36 118-02-36 118-02-01 118-02-21 118-02-21 118-03-38 118-07-01 118-11-47 118-01-09 118-11-05 118-11-40 118-11-40 118-10-00 118-10-12 118-06-33 118-12-42 118-05-00	670 795 864 665 611 700 985 1,180 1,100 1,186 1,345 1,400 2,550 1,155 1,300 1,270 1,181 2,650 1,220 4,500 2,020 1,800	11.10 12.75 12.02 15.09 15.21 15.79 18.82 16.95 18.59 13.49 12.50 18.26 17.50 13.20 14.35 13.91* 13.72 25.28 14.27 23.15 16.31 14.77	1101 1101 1101 1101 1101 1101 1101 110	San Marino-Huntgtn Library Pasadena-Cal Tech. Pasadena Sierra Madre-Pegler Arcadia P.P. No. 1 Sierra Madre P.P. Sierra Madre-Mira Monte Bailey Debris Dam Sierra Madre Dam Altadena Golf Course Flintridge F. S. Santa Anita Dam No. 2 Henninger Flats Arroyo Seco Patrol Descanso Gardens La Canada-Roberts Arroyo Seco-Chlorine Plant Hoegees FC 60A Arroyo Seco R. S. Mt. Lowe Alta Canyada-Carpenter Oak Wilde-Phillips
U-05.D	33-59-40 34-00-12 34-00-12 34-00-13 34-02-35 34-03-52 34-05-36 34-06-05 34-06-11 34-06-18 34-06-26 34-06-58 34-07-39 34-07-57 34-08-03 34-08-50 34-08-57 34-09-05 34-09-20 34-09-22	117-59-37 117-52-14 117-56-19 117-51-09 118-04-50 117-57-04 117-52-28 117-57-40 118-07-52 118-05-56 118-06-32 117-48-19 118-09-05 117-47-42 117-53-32 117-54-17 117-51-54 117-51-33 117-52-01 118-00-04 117-46-28 117-54-28 117-50-57	860 488 380 533 285 358 575 386 533 450 472 960 660 1,110 615 612 782 822 835 560 1,350 750 1,165	12.57 10.85 11.78* 11.17 9.96* 10.40* 12.61* 11.63 11.57 12.06 11.94* 12.88 11.16 14.47 14.28 13.98 14.15 14.81 15.59 12.94 16.88 16.28 17.04	1101 4004 1101 1101 1101 1101 1004 1101 1101 1101 14004 1101 1101 1101 1101 1101 1101 1101 1101 1101 1101	Puente Hills Walnut P. S. Puente-Bixby Rn. Walnut Fruit Grower Assoc. Potrero Heights West Covina-Hurst Rn. Covina-Temple F.C. 193 Baldwin Park Exper. Sta. Alhambra San Gabriel F.D. San Gabriel-Bruington 2 San Dimas F.C. 95 So. Fasadena-City Hall San Dimas-Stevens Azusa-Foothill Rn. Azusa City Park Glendora-West F.C. 185 Glendora-Brown Monrovia News-Post San Dimas Dam San Gabriel Cn. P. H. Glendora-Englehart

^{*}Partially estimated.

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	U- 05	L. ASan Gab	riel Rive	r H ydro	Unit (co	ontinued)
U-05.D	34-09-46	117-54-15	770	16.41	1101	Rogers Cn.
0-07.0	34-09-58	117-59-37	962	17.20	1101	Monrovia-5 Points
	34-10-04	117-46-02	1,435	17.62	1101	San Dimas R. S.
	34-10-06	117-48-36	1,575	18.58	4004	Big Dalton Dam
	34-10-34	117-59-14	1,378	18.55	1101	Sawpit Dam No. 2
	34-10-53	117-52-43	1,210	17.43	1101	Morris Dam No. 2
	34-11-38	117-57-52	2,725	21.88	1101	Sawpit CnDeer Park
	34-11-48	117-41-45	5,200	24.59	1101	San Dimas CnFern Cn.
	34-12-19	117-51-40	1,481	19.01	4004	San Gabriel Dam
	34-12-19	117-45-40	2,750	18.60	1101	Tanbark Flats
	34-13-27	118-03-32	5,650	23.96	1101	Mt. Wilson Observatory
	34-13-33	117-50-48	1,500	18.83	1101	San Gabriel Dam 1 Camp
	34-13-36	118-03-57	5,709	19.96	4004	Mt. Wilson F.C. 338B
	34-13-51	118-02-19	3,325	24.82	1101	Sturtevant Camp
	34-14-10	117-48-18	1,600	17.86*	1101	San Gab. CnE. Fork 2
	34-14-20	117-51-36	1,530	17.75*	1101	Camp Rincon-Mason
	34-17-04	117-51-58	4,025	22.60	1101	Bear CnSan Gab. W. Fork
	34-18-58	117-50-30	5,370	25.39	4004	Crystal Lake F. C. 283C
	34-20-23	117-56-21	7,925	20.67	1101	Waterman Mtn.
	34-21-18	117-52-32	6,665	23.33	1101	Cedar Springs-Prison Camp
	34-22-26	117-45-05	6,600	28.03	1101	Vincent Gulch
	J+-22-20	II - +) - 0)	0,000	20.05	1101	VINCEITO GAZEII
U-05.E	34-03-17	117-45-02	880	12.36*	1101	Pomona F. S.
	34-03-58	117-46-21	855	12.99	4004	Pomona
	34-05-30	117-48-22	1,030	11.88	1101	Puddingstone Dam
	34-06-03	117-46-12	1,050	13.37	1101	La Verne Police Dept.
	34-07-22	117-43-11	1,403	14.16	1101	Claremont-Indian Hills
	34-08-54	117-41-52	1,810	16.87	1101	Padua Hills P. S.
			Í			
U-05.F	33-48-38	118-04-38	23	7.44	1101	Los Alamitos
	33-51-33	117-53-06	190	8.20	5102	Placentia-A. U. Water Co.
	33-51-57	117-59-50	75	7.98	1101	Buena Park
	33-52-15	117-54-24	195	10.22	5102	Fullerton-Knowlton
	33-52-42	117-52-24	225	9.21	5102	Placentia Mutual Orange
	33-53-17	117-49-03	395	11.17	4004	Yorba Linda
	33-53-25	117-55-31	275	9.40	4004	Brea Dam
	33-55-58	117-56-38	315	9.01	5102	La Habra F. S.
	33-57-08	117-55-26	645	10.70	1101	Puente Hills-Wessel Rn.
	33-58-41	117-49-58	748	10.87	1101	Diamond Bar Rn.

^{*}Partially estimated.

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PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME	
		IAHONTAN	DRAINAGE	PROVINCE	(W)		
		<u>W-0</u> :	l Mono H	ydro Unit			
W-01.0	37-45-07 37-53-32 37-56-10	119-08-36 119-05-45 119 - 13-56	9,120 6,980 9,500	16.01 8.46 18.86	1200 1200 1200	Gem Lake Cain Rn. Ellery Lake	
		W-03	Owens H	ydro Unit			
W-03.B	37-03-10 37-07-31 37-08-31 37-10-32 37-12-48 37-22-17 37-28-12 37-35-15	118-13-40 118-25-58 118-19-22 118-33-37 118-36-48 118-21-56 118-43-24 118-42-16	3,850 8,200 4,670 9,600 9,140 4,108 9,360 6,790	3.33 9.15 3.46 13.15 11.35 3.07 12.85 5.80	1200 1200 1200 4004 1200 4004 1200 1200	Tinemaha Res. Big Pine CrGlacier Big Pine P. P. No. 3 South Lake Lake Sabrina Bishop W. B. Airport Rock Cr. Store Long Valley Res.	Lodge
W-03.C	36-08-18 36-25-09 36-36-01 36-40-15 36-48-05 36-58-31 37-03-10	117-57-20 118-02-15 118-03-38 118-05-40 118-12-08 118-12-31 118-13-40	3,825 3,710 3,720 3,725 3,950 3,825 3,850	5.02 2.69 3.04 2.69 2.96 2.68 3.33	4004 1200 1200 1200 4004 1200 1200	Haiwee Cottonwood Gates Lone Pine L.A.AAlabama Hills Independence L.A.AIntake Tinemaha Res.	
		W-05 D	eep Sprin	gs Hydro	Unit		
W-05.0	37-22-15	117-59-03	5,225	2.55	4004	Deep Springs College	
		W-21	Searles	Hydro Uni	<u>.t</u>		
W-21.A	35-45-42	117-22-27	1,695	4.66	4004	Trona	
		W-214 I	ndian Wel	ls Hydro	Unit		
W-24.A	35-57-07	117-55-31	3,510	5.95	1200	Little Lake	
W-24.B	35-35-40	117-55-04	3,310	4.23	1200	L.A.AFreeman Sta.	

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PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

				22222						
HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME				
	W-26 Antelope Hydro Unit									
W-26.A	34-20-23 34-20-50 34-22-26 34-22-44 34-22-45 34-22-53 34-23-53 34-25-02	117-56-21 117-49-57 117-45-05 118-01-53 117-41-20 117-41-05 117-43-40 117-58-17	7,925 7,590 6,600 6,925 6,860 7,500 6,150 3,925	20.67 35.35 28.03 14.38 20.42 15.75 16.14*	1101 1101 1101 1101 4004 4004 1101	Waterman Mtn. Little Jimmy Springs Vincent Gulch Pacific Mtn. Big Pines Park Table Mtn. Jackson Lake-Big Pines Little Rock-Sycamore Camp				
	34-26-36 34-26-36 34-26-44 34-27-35 34-28-05 34-30-18 34-32-14 34-32-14 34-34-25 34-34-42 34-37-23 34-37-12 34-37-23 34-40-57 34-42-15 34-44-15 34-44-15 34-44-17 35-02-49 35-04-07	118-04-00 117-51-02 117-51-58 117-44-51 118-01-40 117-58-30 118-03-48 118-05-02 118-10-58 118-10-58 118-13-57 117-50-55 118-8-03 118-25-40 118-21-15 118-32 118-27-20 118-27-20 118-43-29 118-9-58 118-09-58 118-09-58	3,920 3,715 3,996 3,810 3,035 2,855 2,855 2,662 2,517 3,125 2,950 2,680 2,352 2,450 3,050 2,600 3,700 3,075 2,865 4,517 2,735 2,850	9.98 7.34 8.42* 6.04 6.80 6.31 6.94 7.95* 8.87* 5.35 13.24 8.37 5.44 8.37 5.44 8.37 5.44 8.37 5.44 8.37 5.44 8.37 5.44 8.37	1101 1101 1004 1101 1100	Santiago Cn. Valyermo R. S. Pleasant View Mesa-Neal Llano-Shawnee Hills Rn. Little Rock Creek Calivali Farms Palmdale-Circle C Palmdale-Co. Maint. Yard Anaverde Valley-Platt Falmdale Airport Leonis Valley-Ritter Rn. Bellview-Stratman Piute Butte-Museum Lancaster-Hwy. Maint. Lancaster Antelope Valley Field Sta. Fairmont Munz Valley Rn. Sawmill Mtn. Rn. Hi Vista-Card Fairmont-Barnes Sandbergs P.S. Sandberg W.B. Mojave Mojave				
		W-28	Modaza	Hydro Uni	·+					
		<u>w=20</u>	Mojave	11, 410 0111						
W-28.B	34-14-19 34-15-06 34-25-23 34-31-57	117-14-06 117-11-30 117-18-11 117-18-12	5,723 5,250 3,200 2,900	34.30 34.40 7.98 7.07	4004 4004 5100 4004	Squirrel Inn 2 Lake Arrowhead Hesperia Victorville P.P.				
W-28.E	34-54-03	117-01-17	2,142	3.54	4004	Barstow				
W-28.H	35-23-18	116-06-46	1,045	2.33	4004	Baker 9NNW				

^{*}Partially estimated.

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP.	AGENCY	STATION NAME				
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)										
	X-05 Emerson Hydro Unit									
x- 05.0	34-09-44	116-32-25	4,300	7.18	4004	Kee Ranch				
		<u>X-09</u>	Dale Hy	dro Unit						
X-09.A	34-08-03	116-03-12	1,990	5.74	4004	Twentynine Falms				
	X-12 Ward Hydro Unit									
X-12.0	34-08-44	115-07-16	922	3.17	4004	Iron Mtn.				
X-13 Piute Hydro Unit										
X-13.C	34-45-48	114-37-08	913	4.04	4004	Needles F.A.A. Airport				
		<u>x-15</u>	Colorado	Hydro Un	<u>it</u>					
X-15.D	33-36-34 33-36-50	114-35-45 114-35-54	266 268	5.88 5.37	4004 4103	Blythe F. S.				
	33-36-51	114-42-50	390	4.29	4004	Blythe Airport				
		X-17	Chuckwalla	a Hydro U	mit					
X-17.B	33-48-31	115-27-01	973	2.67	4004	Eagle Mtn.				
,		<u>x-18</u>	Hayfield	Hydro Un	iit					
x-18.0	33-42-18	115-37-44	1,370	2.00	4004	Hayfield P.P.				
	X-19 Whitewater Hydro Unit									
X-19.A	34-03-19	116-34-31	2,580	9.67	4004	Morongo Valley				
X-19.C	33-51-58 33-55-03 33-55-39	116-44-59 116-46-56 116-58-47	3,440 1,815 2,580	25.23 14.43 17.05	4103 4004 4004	Hurley Flat-Twin Pines Cabazon Beaumont				

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

		,		,		
HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	2	K-19 Whitewat	er Hydro	Unit (cor	ntinued)	
X-19.D	33-29-37 33-34-13 33-38-04 33-40-11 33-42-48 33-43-21 33-43-37 33-46-56 33-49-01 33-52-13 33-57-48	116-06-44 116-04-33 116-09-28 116-18-08 116-13-25 116-22-17 116-14-40 116-28-00 116-31-38 116-40-55 116-30-08	-170 -190 -120 90 -8 263 -20 300 411 1,940 1,100	3.33 3.39 3.60 3.72 5.01 4.39 4.30 6.58 6.24 14.13 4.49	4103 4103 4004 4103 4103 4103 4004 4103 4004 4004	Oasis Mecca State Forestry Thermal Airport La Quinta F.S. Indio State Forestry Palm Desert Indio-U.S. Date Garden Cathedral City F.S. Palm Springs Snow Creek-upper Desert Hot Springs
		X-22 An	za-Borre	o Hydro I	Unit	
X-22.A	33-16-08	116-24-59	750	6.65	1+001+	Borrego Desert Park
X-22.C	33-12-33	116-32-30	4,110	14.24	4004	Ranchita
		X-23	Imperial	Hydro Un	it	
X-23.A	32-40-28 32-46-02 32-50-57 32-58-53 33-16-41	115-28-57 115-33-52 115-34-06 115-31-44 115-31-23	12 -32 -69 -119 -55	2.51 2.21 2.44 2.53 3.07	4004 4004 4004 4004 4004	Calexico 2NE El Centro 2SSW Imperial Brawley 2SW Niland
X-23.B	32-44-32	115-57-48	250	2.43	4004	Coyote Wells

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

TYDRO UBUNIT LATITUDE LONGITUDE ELEV. PRECIP AGENCY	STATION NAME
---	--------------

SANTA ANA DRAINAGE PROVINCE (Y)

Y-Ol	Santa	Ana	River	Hydro	Unit

-01.A	33-36-15 33-36-26 33-38-13 33-39-13 33-39-39 33-40-30 33-40-32 33-41-40 33-41-46 33-42-38 33-42-39 33-42-55 33-42-55 33-42-19 33-43-21 33-44-18 33-45-00 33-46-13 33-46-15 33-47-14 33-48-35 33-49-46 33-49-46	117-53-00 117-42-07 117-42-07 117-42-54 117-55-20 117-42-53 117-59-57 117-49-50 117-49-38 117-42-48 117-51-16 117-31-59 117-45-43 118-00-46 117-48-00 117-52-12 117-52-12 117-52-12 117-52-12 117-52-12 117-54-08 118-00-06 117-49-20 117-54-48 117-54-48	8 400 300 90 350 35 80 200 100 480 400 55,660 25 197 25 106 115 145 90 1,000 216 135 55 290 147 150 290	9.84 9.95 11.49 9.30 10.63 8.83 8.86 10.56 9.24 11.63 10.19 8.03 25.25 6.96 11.04 7.65 7.20 9.71 10.01 8.20 13.21 13.02 8.97 9.48 10.13 8.84 10.14	4004 5102 5102 5102 5102 5102 5102 5102 5102	Newport Beach Harbor El Toro-Moulton Irvine CoShady Camp Costa Mesa-Dod e Irvine CoJohnson Rn. Huntington Beach Irvine CoUarehouse Irvine CoHarkel Rd. Camp Irvine RnLambert Auto Irvine CoIambert Dyler-Holly Sugar Co. Santiago Peak Wintersburg-Murdy Rn. Tustin Automatic Santa Ana F. S. Santa Ana F. S. Santa Ana F. S. Santa Ana-O.C.F.C.D. Garden Grove-Co. Rd. Dept. Irvine CoLimestone Rn. Orange-U.S.F.S. Anaheim-Katella Substation Stanton-Clark Villa Park Orchard Assn. Anaheim Automatic Anaheim Water Works Olive Hots. Citrus Assn.
	33-50-16 33-51-33	117-50-43 117-53-06	230 190	10.14 8.20	5102 5102	Olive Hats. Citrus Assn. Placentia-A.U. Water Co.
Y-01.B	33-49-51 33-50-36 33-52-23 33-55-58 33-57-06 33-57-37 33-58-21 33-58-21 33-58-43 33-59-52 34-01-34 34-03-17 34-03-22 34-03-41	117-34-41 117-34-36 117-33-56 117-56-38 117-23-46 117-16-42 117-19-48 117-35-38 117-22-29 117-40-50 117-46-06 117-45-02 117-19-08 117-41-16	1,225 1,050 680 315 820 3,040 1,050 660 875 670 820 876 940 965	16.19 13.44 12.39 9.01 9.36 12.04 10.40 10.29 11.65 10.39 11.46* 12.36* 12.154	4701 4701 5717 5102 4004 4103 4004 5100 4103 4740 1101 4740 5100	Corona-Foothill Lemon P Corona-Foothill Lemon 1 Corona-Temescal Water 3 La Habra F. S. Riverside Fire Sta. No. 3 Box Springs Riverside Citrus Exp. Sta. Chino-Imbach Riverside Chino-S.C.E. Substation Pomona-Rivera Pomona Fire Dept. Colton-S.C.E. Substation Monte Vista F. S.

^{*}Partially estimated.

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
	<u>Y</u> -	Ol Santa Ana	River H;	ydro Unit	(contin	ued)
Y-Ol.B	34-04-05 34-05-45 34-05-48 34-06-03 34-06-29 34-07-28 34-07-22 34-07-22 34-07-57 34-08-23 34-09-20 34-09-24 32-12-50	117-35-25 117-42-57 117-42-33 117-26-04 117-26-09 117-25-36 117-40-45 117-43-11 117-31-24 117-40-35 117-40-55 117-40-20 117-40-10	975 1,180 1,185 1,279 1,280 1,325 1,508 1,403 1,403 1,495 1,830 2,090 2,120 3,200	11.97 13.12 13.21 14.33 13.74 14.32 14.70* 14.16 14.12 15.61 16.97 11.20 23.76	4731 1101 4004 5100 4706 5100 1101 1101 5100 4004 1101 1101	Guasti Wine Co. Claremont F. S. Claremont-Pomona College Fontana-Herald News Fontana-Union Water Co. Fontana B.B. Co. Upland-Cadnum Claremont-Indian Hills Etwanda S.F. Upland 3N San Antonio Spr. Grds. San Antonio Dam San Antonio CnSierra P.H.
Y-Ol.C	33-42-39 33-50-28 33-50-35	117-31-59 117-21-30 117-26-47	5,660 1,540 1,375	25.25 9.38 8.95	5100 4103 4103	Santiago Peak Cajalco No. 2 Lake Matthews No. 1
Y-Ol.D	33-59-43 34-04-00 34-06-24 34-07-26 34-09-20 34-12-07 34-12-14 34-12-16 34-13-57 34-14-14	117-13-55 117-19-23 117-21-50 117-20-53 117-23-46 117-27-00 117-26-45 117-26-57 117-28-52 117-29-28	1,880 980 1,246 1,225 1,590 2,225 2,250 2,300 2,720 2,800	14.45 13.48 13.14 14.12 15.77 25.11 24.53 23.70 23.87 26.42	4103 5100 5100 3200 4740 4740 4004 4706 4004 4740	Reche Canyon-Atopa Ranch Colton Fire Dept. Rialto Lytle CrS.B.W.D. Plant Fontana Powerhouse Lytle Cr. P.H. Lytle Cr. P.H. No. 1 Lytle Cr. F.U.W. Intake Lytle Cr. R. S. Lytle Cr. S.C.E. Intake
Y-Ol.E	34-02-00 34-03-03 34-04-02 34-04-15 34-05-16 34-06-09 34-06-47 34-07-17 34-07-42 34-08-15 34-08-16 34-10-21 34-12-06 34-12-16	117-02-12 117-11-28 117-03-02 117-07-15 117-02-19 117-17-27 117-10-07 117-09-58 117-16-05 117-12-30 117-03-26 117-18-44 117-19-58 117-06-05	2,810 1,360 1,650 1,765 2,965 1,030 1,370 1,525 1,125 1,370 2,765 1,415 1,900 6,000	11.12 11.84 15.62 11.75 21.31 11.68 10.66 15.88 14.49* 16.04 22.51 17.14 20.11 21.19	5100 4004 4730 5100 4004 3200 4732 5100 4004 5100 4004 3200 3200 5100	Yucaipa F.S. Redlanās Mentone-Craftor Orange Co. Mentone F.C.S. Mill Cr. No. 2 Hanford Plant S.B.W.D. E. Highland-Gold Buckle E. Highland-Orange Co. San Bernardino Hosp. Patton S.B. Santa Ana River P.H. No. 1 Newmark Res. Devil Cn. Running Springs
Y-01.F	33-55-39	116-58-47	2,580	17.05	4004	Beaumont
Y-01.G	34-14-26	116-58-34	6,815	30.77	4004	Big Bear Lake Dam

^{*}Partially estimated.

TABLE A-3

PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
		Y-02 San J	acinto Va	lley Hyd	ro Unit	
(-02.B	33-47-15 33-55-39 33-55-48	116-58-06 116-58-47 116-57-01	1,550 2,580 2,600	12.05 17.05 16.11	4004 4004 4103	San Jacinto Beaumont Beaumont S.F. Sta.
Y-02.C	33-40-06	117-19-51	1,300	9.98	4004	Elsinore

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO	LATITUDE	LONGITUDE	ELEV.	PRECIP	AGENCY	STATION NAME
SUBUNIT		SAN DIEC		E PROVING	CE (Z)	
					(-/	
		<u>z-01</u>	San Juar	n Hydro Un	nit	
Z-Ol.A	33-32-48 33-36-26	117-46-53 117-42-07	56 400	9.91 9.95	4004 5102	Laguna Beach El Toro-Moulton
Z-Ol.B	33-27-56 33-30-42 33-30-44 33-42-39 33-44-55	117-41-12 117-38-29 117-39-58 117-31-59 117-38-27	20 150 150 5,660 1,275	10.42 11.54 11.09 25.25 16.73	5102 5102 5102 5102 5102	Capistrano Beach Auto. San Juan Capistrano San Juan Cap. Substa. Santiago Peak Silverado Cn. Holtz
Z-01.C	33-25-45	117-36-52	135	11.50	5102	San Clemente
		- 00 G	,			
		<u>Z-02 Sar</u>	ita Marga:	rita Hydr	o Unit	
Z-02.A	33-13-00	117-23-43	60	9.29	4004	Oceanside-Pendleton
Z-02.G	33-33-18	116-39-52	3,900	15.13	4004	Anza
		Z-03 S	San Luis 1	Rey Hydro	Unit	
Z-03.A	33-15-32	117-01-26	1,615	13.00	4004	Valley Center 3NE
Z-03.B	33-14-18	116-45-40	2,700	25.49	4004	Henshaw Dam
Z-03.C	33-17-06 33-20-42	116-38-10 116-50-42	3,180 5,560	15.31 27.46	4004 4004	Warner Springs Palomar Mtn. Observ.
		Z-04	Carlsba	d Hydro U	nit	
Z-04.A	33-11-38	117-22-37	67	11.65	4002	Oceanside No. 4
Z-04.E	33-03-45	117-15-15	100	8.40	4002	Scott Ranch
Z-04.F	33-01-12	117-12-06	240	9.61	4002	Rancho Santa Fe
		F 05	7 . D.	* 6 - TT 3	75.24	
			oan Diegu	ito Hydro		
Z-05.A	32-57-17 32-59-06 33-01-12	117-15-37 117-15-10 117-12-06	225 200 240	8.44 7.59 9.61	4002 4004 4002	Del Mar Lockwood Mesa Rancho Santa Fe

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME	
	-	Z-05 San Die	guito Hyd	ro Unit (continue	<u>d)</u>	
5-05.C	33-10-12	116-59-47	1,520	14.97	4002	Lake Wohlford	
5-05.D	33-03-41	116-50-53	1,470	14.56	4004	Ramona-Spaulding	
5-05.E	33-06-30 33-12-16	116-40-27 116-45-43	2,984 3,600	25.59 28.67	4002 4002	Santa Ysabel Store Holdredge Ranch	
		<u>z-06</u>	Penasquit	o Hydro U	nit		
2-06.A	32-59-06	117-15-10	200	7.59	4004	Lockwood Mesa	
L-06.B	32-57-00	117-03-48	440	11.40*	4004	Poway Valley	
		Z-07	San Diego	Hydro Un	<u>it</u>		
L-07.A	32-46-51 32-51-56 32-53-09	117-02-38 116-53-39 116-48-40	535 450 600	10.03 13.03 13.37	4002 4004 4004	Murray Dam Lakeside 2ENE El Capitan Dam	71
L-07.D	32-59-20 33-05-34 33-06-30	116-35-12 116-38-39 116-40-27	4,650 3,655 2,984	37.92 23.17 25.59	4004 4004 4002	Cuyamaca Julian Wynola Santa Ysabel Store	
		Z-08	Coronado	Hydro Un	<u>it</u>		
L-08.A	32-40-22	117-14-27	410	8.26	4004	Cabrillo N. M.	
L-08.B	32-43-59 32-46-12	117-10-32 117-00-44	19 5 28	7.05 11.28	4004 4004	San Diego W.B. A.P. La Mesa	
z-08.c	32-40-04	117-06-42	15	6.70	4002	National City	
		Z- 09	Sweetwate	r Hydro U	nit		
Z-09.A	32-37-57 32-39-34 32-41-33 32-46-12	117-05-39 117-01-56 117-00-31 117-00-44	25 105 300 528	8.28 9.09 9.59* 11.28	4002 4004 4004 4004	Chula Vista No. 2 Bonita Sweetwater Dam La Mesa	
Z-09.B	32-46-52	116-47-38	1,400	15.76*	4002	Lake Loveland	
Z-09.C	32-51-31	116-37-39	3,550	25.52	4004	Descanso R. S.	

Partially estimated.

TABLE A-3
PRECIPITATION AT SOUTHERN CALIFORNIA STATIONS JULY 1963 TO JUNE 1964

HYDRO SUBUNIT	LATITUDE	LONGITUDE	ELEV. IN FEET	PRECIP. IN INCHES	AGENCY	STATION NAME
		<u>Z-10</u>	Otay Hy	dro Unit		
Z-10.B	32-36-03	117-05-32	9	8.37	4004	Chula Vista
		Z-11 T	ia Juana	Hydro Uni	<u>t</u>	
Z-11.B	32-40-49	116-40-21	1,623	16.07	4004	Barrett Dam
Z-11.H	32-39-47	116-20-28	3,250	11.96	4004	Boulevard

APPENDIX B

SURFACE WATER FLOW



Introduction

Runoff in Southern California streams is generally responsive to the amount and intensity of precipitation. The estimated unimpaired runoff (runoff unaffected by the works of man) for selected stations representative of conditions in Southern California is presented in Table B-1, together with a comparison with the mean for the 53-year period, 1894-95 through 1946-47. Estimated or measured maximum and minimum flows for each station during the period of record are also given.

Historical unimpaired runoff at four selected stations and the accumulated deviation from the mean seasonal unimpaired runoff are charted on: Figure B-1 for Huasna River near Arroyo Grande; Figure B-2 for Arroyo Seco near Pasadena; Figure B-3 for Santa Ysabel Creek at Sutherland Dam; and Figure B-4 for Big Rock Creek near Valyermo.

The amount of water in storage on the first day of each month of the 1964 water year in selected reservoirs in or supplying water to Southern California is presented in Table B-2.

Data for the 1963-64 water year deliveries of Colorado River water to each of the coastal counties are presented in Table B-3. Table B-4 gives quantities of water diverted from the Colorado River for use in California by each principal agency during the 1964 calendar year. A historical record of net diversions of Colorado River water to California from calendar years 1935 through 1964 is shown graphically on Figure B-5. Figure B-6 presents historical importation of water to coastal Southern California.

The extent of stream flow data collection activities by the Department of Water Resources in Southern California is limited to the

construction, operation, and maintenance of stream-gaging stations in the vicinity of the State Water Project located on Castaic Creek, Elizabeth Lake Canyon Creek, and tributaries to the West Fork of the Mojave River.

The daily mean discharges at these stream-gaging stations are presented in Table B-5.

Measurement Techniques

The streamflow data reported in the daily discharge tables are derived through the use of mechanical, arithmetical, and empirical methods. For each stream-gaging station, a stage-discharge relationship, or rating, curve has been developed. The rating gives the flow in cubic feet per second for each gage height at the station. The gage height is usually measured by an automatic water stage recorder.

The data presented in the daily mean discharge tables are affected by inaccuracies in the procedures and equipment. The following is a listing of significant figures used to establish limits of accuracy for reporting the streamflow data:

1. Daily flows -- cubic feet per second

0.0 - 9.9 -- tenths

10 - 99 -- two significant figures

100 - up -- three significant figures

2. Means -- cubic feet per second

0.0 - 99.9 -- tenths

100 - 999 -- three significant figures

1,000 - above -- four significant figures

The water year totals are reported to a maximum of four significant figures.

Coding

Numerical systems are used for identifying surface water measurement stations. A six-digit number based on a hydrologic area numbering concept is used to identify these stations. The first digit is a letter designating the hydrographic area; the second digit is a number indicating the river basin; the third, a number designating the reach of the stream; and the last three digits, numbers in sequence which are assigned to the stations. These last three numbers start at the downstream end of the reach and increase in size in the upstream direction.



DATA

SURFACE WATER FLOW



TABLE B-1

ESTIMATED 1963-64 SEASONAL UNIMPAIRED RUNOFF AT SELECTED STATIONS IN SOUTHERN CALIFORNIA

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	Period	1062 Ch.	: 53-year :	Percent	Max	Maximumb	Min	Minimum ^b
Station	record	1903-04	mean	nean	Season	Quantity	Season	Quantity
Central Coastal Drainage Province								
Arroyo Grande at Arroyo Grande Huasna River near Arroyo Grande	1939 to date 1959 to date	2,320	23,900 17,200d	10	1906-07	76,200 64,730d	1930-31 _e	800 0d
Los Angeles Drainage Province								
Sespe Creek near Fillmore	1911-13	13.660	93,900	15	1940-41	376.000	1950-51	3,520
Arroyo Seco near Pasadena	1910 to date	1,390	7,290	13	1921-22	25,400	1890-99	160
Saird Anlta Creek hear Sierra Madre San Gabriel River near Azusa	1910 to date 1894 to date	1,100	4,920	22 20	1942-43	16,600	1496-99 1960-61	210
Labontan Drainage Province								
Owens River below Long Valley	1916 to date	102,600	168,500	61	1906-07	292,000	1330-31	73,010
big Rock Creek near Valyermo	1923-3/ 1938 to date	2,390	15,000	19	1921-22	37,000	1950-51	1,360
Deep Creek near Hesperia	1904-22 1929 to date	10,170	¹ 001,74	22	1921-22	177,0008	19-09-61	4,2408
Colorado River Basin Drainage Province								
Colorado River at Lee's Ferry	1,11 to date	0,312,000	11,600,000ch	58	1916-17	21,660,00008	1933-34	4,377,00008
Colorado Alver Delow Roover Dam	1933 to date	8,234,000	11,168,000°J	47	1941-42	17, 880,000°8 1933-34	1933-34	5,058,00008

ESTIMATED 1963-64 SEASONAL UNIMPAIRED RUNOFF AT SELECTED STATIONS IN SOUTHERN CALIFORNIA (continued)

In acre-feet

	Period	17 6701	: 53-year	Percent	Max	Max1mum ^b :	Mini	Minimum ^b
Station	record	1903-04	meana	mean	Season	Quantity	Season	. Quantity
Colorado River Basin Drainage Province (continued)								
Colorado River at Yuna	1878 to date	009,476	5,646,000°3	17	1908-09	26,070,000°8	19-0961	707,270°8
rain canyon creek near Palm Springs	1930-41 1947 to date	340	3,580k	0/	1936-37	18,980€	1955-56	0,28
Santa Ana Drainage Province								
Cucamonga Creek near Upland Santa Ana River near Mentone	1928 to date 1896 to date	1,490	6,190	24 25	1921-22 1915-16	20,900	1898-99 1898-99	930
San Diego Drainage Province								
Murrieta Creek at Temecula	1930 to date	280	8,670	m	1915-16	60,300	19-0961	320
Sutherland Dam	1936 to date	900	15,200	т	1915-16	95,200	1960-61	130
Cottonwood Creek at Morena Dam	1936 to date	180	12,400	П	1915-16	75,300	19-0961	70

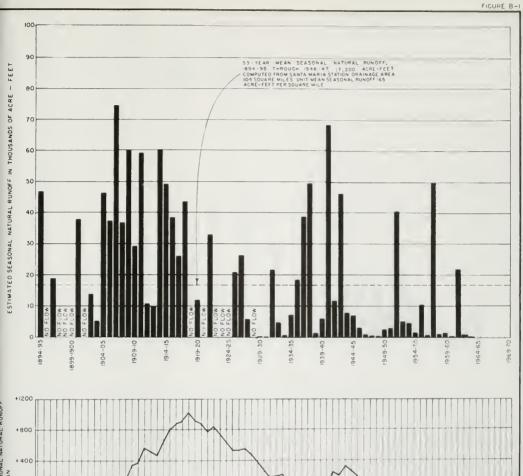
Mean for period 1894-95 through 1946-47, except as noted. Indicated maxima and minima are recorded or estimated values for period 1894-95 to date except as noted.

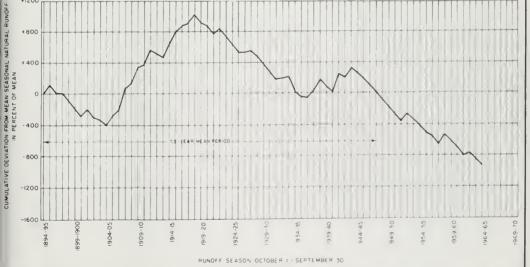
Measured runoff, unadjusted for upstream development.

53-year mean computed from Santa Maria Station. Zero flow reported for eleven seasons.

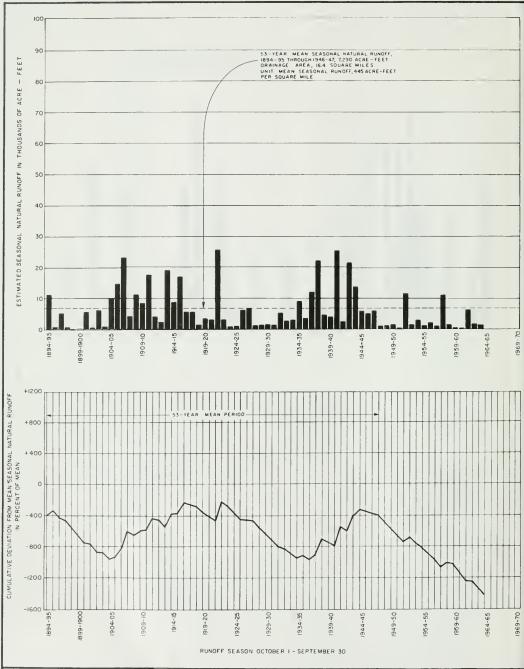
Average for period 1920-21 through 1949-50.

Indicated maxima and minima are recorded or estimated values for a given period of record. Average for period 1922-22 through 1975-56.
Average for period 1936-37 through 1975-56.
Average for period 1936-31 through 1940-41 and 1947-48 through 1957-58. ky. he.



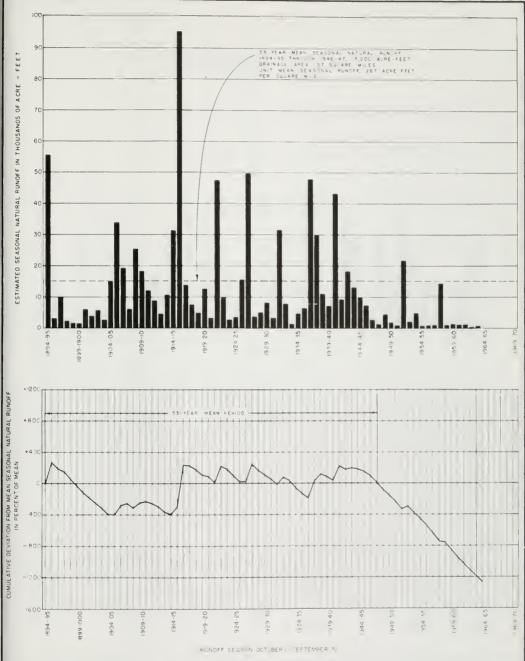


REPRESENTATIVE RUNOFF CHARACTERISTICS HUASNA RIVER NEAR ARROYO GRANDE

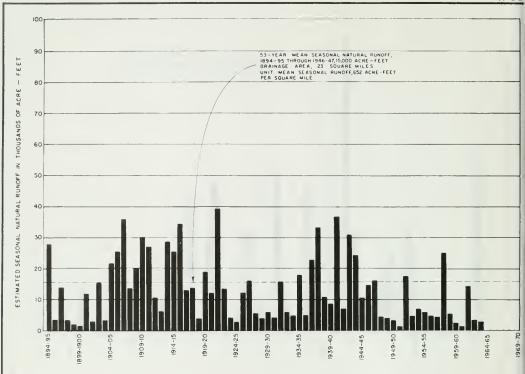


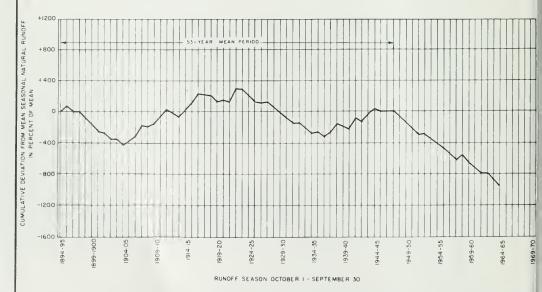
REPRESENTATIVE RUNOFF CHARACTERISTICS
ARROYO SECO NEAR PASADENA

FARTMENT WATER RE JR E JUTHERN ULTR - 460



REPRESENTATIVE RUNOFF CHARACTERISTICS
SANTA YSABEL CREEK AT SUTHERLAND DAM





REPRESENTATIVE RUNOFF CHARACTERISTICS
BIG ROCK CREEK NEAR VALYERMO

TABLE B-2

MONTHLY WATER CONTENT OF SELECTED SURFACE RESERVOIRS IN OR SUPPLYING WATER TO SOUTHERN CALIFORNIA OCTOBER 1, 1963 TO SEPTIMEBER 1, 1964

Drafnage province:		Capacity,				WB	Water in storage	on first	day of month,	, in acre-feet	et			
and stream		lo acre-feet	October	November	Бесешьег	January	February	March	April	May	June	July	August	September
Central Coastal	Whale Rock	000,04	11,690	11,650	12,003	12,003	12,060	12,060	12,088	946,11	11,413	10,838	10,437	10,173
Santa Maria	Gibraltar Cachuma Tvitchell	204,900	8,826 171,736 1,826	8,308 170,011 1,775	8,795 169,604 1,815	8,369 168,574 1,849	1,444,7	7,444	7,144	8,187 162,217 0	7,992 158,666 0	7,593	7,194	6,783
Los Angeles Coyote Greek Piru Creek Bouquet Greek	Casitas Lake Piru Bouquet Canyon	246,000 100,000 36,510	12,648 12,648 27,514	47,049 12,200 22,127	16,896 12,586 21,374	16,364 12,483 21,572	13,089 22,076	45,796 13,325 32,464	45,828 13,132 35,570	45,471 7,344 34,826	44,680 7,618 34,950	44,078 7,419 34,091	42,884 7,052 33,184	41,588 6,686 30,204
Lahootan Rush Creek Owens River Rose Valley	Grant Lake Lake Crowley Haiwee (South)	47,530 183,470 58,530	170,595 33,675	41,319 160,727 44,075	43,853 152,625 50,040	43,533 146,144 53,419	41,006 142,064 54,109	39,146 140,718 53,419	34,534 154,508 47,093	30,878 151,222 44,702	32,687 149,828 42,835	37,116 151,689 40,110	37,216 149,364 28,596	32,976 1142,514 18,340
Colorado River Basin Colorado River	Lake Mead Lake Mojave Lake Havasu	27,207,000 1,810,000 619,000	17,371,000 1,406,400 540,900	16,910,300 1,381,200 546,300	16,518,000 1,393,000 542,700	16,012,000 1,551,000 531,900	15,448,000 1,696,000 547,200	15,090,000 1,674,100 536,400	14,609,000 1,663,000 546,300	14,564,000 1,715,200 597,400	14,140,000 1,790,200 612,200	13,446,000 1,655,200 580,000	12,599,000 1,537,900 573,400	12,098,800 1,418,000 558,200
Saota Ana Bear Creek	Bear Valley	72,170	2,810	2,631	2,751	2,810	2,989	3,049	3,920	6,212	6,784	965'9	5,511	14,300
San Jacinto River Cajalco Creek Santiago Creek	Lake Hemet Railroad Canyon* Lake Mathews* Santiago*	13,400 114,700 182,000 25,000	518 1,910 170,779 2,870	1,616 167,353 2,795	1,537 177,295 2,795	1,381 169,340 2,820	756 1,220 176,886 3,105	976 2,756 167,142 5,400	1,182 856 169,739 6,915	1,507 5,288 159,223 6,940	1,663	1,715 4,004 143,940 6,980	1,594 2,951 122,270 6,960	1,252 2,159 112,522 6,525
San Diego Temecula Creek	Vail	005 , 64	1,585	1,569	1,582	1,589	1,627	1,648	1,774	1,812	1,801	1,741	1,659	1,570
Sen Luis Rey River	Lake Henshav	194,320	066,4	5,370	980,9	6,568	486,9	7,145	7,064	196'9	6,800	6,341	5,794	5,289
Senta Ysabel Creek	Sutherland	29,680	2,948	2,895	2,898	2,874	2,891	2,875	3,020	3,175	3,189	3,116	3,019	2,915
Sen Dieguito	Lake Hodges*	33,550	3,032	3,529	3,967	3,460	3,054	2,463	2,656	2,495	2,471	2,356	2,263	2,382
San Vicente Creek Boulder Creek San Diego River	San Vicente Lake* Cuyanaca Chet Harritt* El Capitan Lake*	* 90,230 11,600 10,500 * 112,810	57,856 4,423 8,336	58,976 0 4,434 9,823	64,879 1 14,477 10,130	67,765 1 4,638 9,837	68,467 24 2,618 8,460	65,979 24 4,596 8,438	67,558 321 4,585 8,504	65,288 5774 4,542 8,774	65,102 0 4,477 9,608	06,598 0,434 9,461	64,360	61,398 0 4,151 9,010
Sweetwater River Otay River	Lake Loveland Sweetwater (Main)* Lover Otay Lake*	25,250 a)* 27,150 * 56,520	1,417 2,502 3,185	1,418 2,458 3,101	1,424,22,519	1,415 2,522 2,939	2,267	1,420 2,246 2,899	1,435 2,490 2,899	2,393	1,489 2,545 2,781	1,463 2,610 2,723	2,526	1,402 2,610 2,554
Cottonwood	Morena Barrett	50,210	342	342	342	1,231	352	1,238	390	1,255	384	352	1,130	279

[&]quot;Includes Imported Colorado River Water.

TABLE B-3

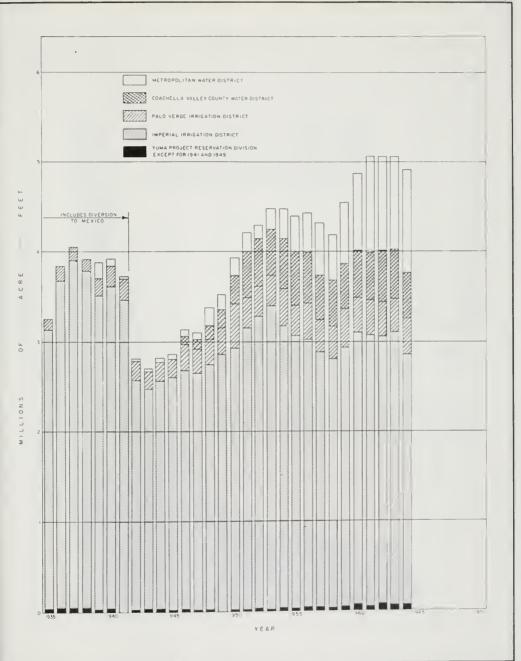
COLORADO RIVER WATER IMPORTED TO COUNTIES IN COASTAL SOUTHERN CALIFORNIA DURING 1963-64 WATER YEAR

County	Seasonal import, in acre-feet
Los Angeles County	465,395
San Diego County	230,912
Orange County	306,694
Riverside County	82,656
San Bernardino County	16,667
Ventura County	6,955
TOTAL	1,109,279

TABLE B-4

QUANTITIES OF WATER DIVERTED FROM THE COLORADO RIVER FOR USE IN CALIFORNIA DURING 1964

Diversion, in acre-feet
1,129,400
400,740
2,807,670
511,080
49,510
4,898,400



NET DIVERSIONS OF WATER TO CALIFORNIA FROM THE COLORADO RIVER

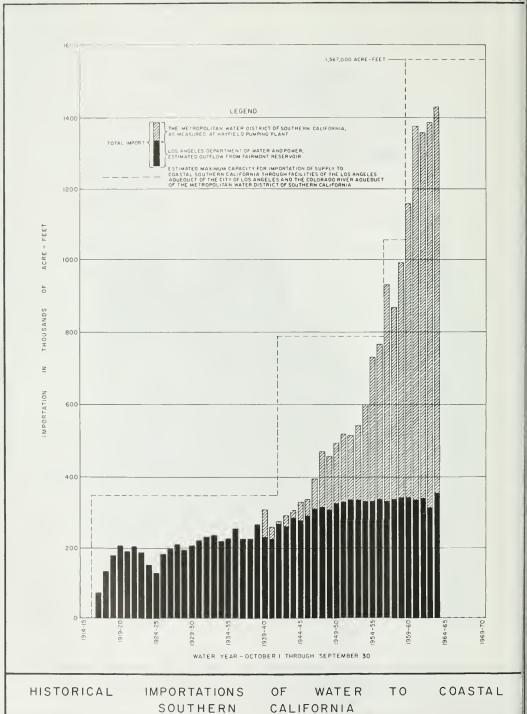


TABLE B-5 DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO	STATION NAME	
1964	V92200	WEST FORK OF HE MUJAVE HIVER BELOW CEDAR SPRINGS	

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DA
9	0.0	0.0	0.2	0.3	0.2	0.5	103 .	1.7	4 . 4	. 4	0.0	0.0	
2	0.0	0.0	0.3	0.3	0.2	0.4	73 •	1.7	4.	3	0.0	0.0	2
3	0.1	1.0	0.3	C + 3	0.2	0.4	37 0	1.7	4.	.3	0.0	0.1	2
4	0.0	0.0	0.3	0.3	0.2	0.4	27	: 9	4.		0.0	0.0	4
5	11.11	0.0	0.3	0.3	1.2	0.4	23	1.9	4 .		0.0	0.0	5
6	0.0	0.0	0.3	1.3	0.2	0.4	2.3	7.0	4 .0	1.0	0.0	0.0	
7	0.0	0.0	0.3	0.3	0.3	0.3	18	9.11	4 .		0.0	0.0	7
8	0 # 1	0.0	0.3	0+2	1 + 1	0 + 4	11	6 . A	4 .	.0	0.0	0.0	8
9	0.00	0.40	0.4	0 + 2	0.3	0.4	9.4	9.6	4.	1.0	0.0	0.0	9
10	0.40	0.0	0.3	0 • 2	0.3	0.4	9+1	6 • 8	60 g	• (1	(N. C.)	0.0	ID
11	0.0	0.0	0.3	0.2	0.3	0 . 4	7.5	6.	3.9	0.0	-040	0.0	- 11
13	0.0	0.0	0.3	0.2	0 + 3	0.5	5 + 8	3.9	3 • 7	0.0	0.0	0.	12
13	0.0	0.0	0.3	0.2	0.3	0.5	4.3	3.7	3.7	• (1)	0.0	0.0	13
14	0.0	0+0	0.3	C . 2	0.3	0 + 4	1.8	4.0	-: +6	-73	0.40	0.0	14
15	0.0	0.0	0.3	. ?	0.3	0.4	1 . 2	4 a	3.00	**	0.0	0.0	15
16	1.	U.O	0.3	. 2	0.3	0.4	1 + 4	40	* # 44	• 0	00	n.h	14
17	n.	.0	0.9	0 • 2	0.3	0.4	1.5	10 g	3 4 3 =		2.1	0.	17
18	0.0	0.0	0.3	0 • 2	0.3	0 + 4	1 . 4	4 . 4	3 + 4	1.0	1.0	4.0	18
19	0.0	0.0	0.9	0 • 2	0.4	0 + 4	1.9	4 4 4 4	100	4.1	0.0	0 • OI	19
30	0.0	7.20	0.3	0 • 2	0.4	0.4	1.8	4	2 4 1	+1	1+0	0.0	20
21	0.0	7.50	0.9	648*	0.4	0.4	1 . R	la a la	4.5	1.0	0.0	4.0	21
32	^.^	2 • 8	0.3	14	0.4	7.5	1 = 4	4.5	6		1.0	0.1	22
23	0.0	1.0	0.3	6 • 7	0 . 4	0.7	1.6	4.7		+0	0.0	0.0	23
24	0.40	0.4	0.3	1+6	0 . 4	3 + 8	1.6	4 . '	1.2	+0	0.0	0.0	24
25	0.0	7.7	0.3	0.3	0.5	9.44	1.6	40 0		(0.0	0.0	35
26	17.4.0	2.5	0.3	4.2	0.6	9.0	1+5	4.6	La r	1,0	0.0	0.0	24
27	0.0	2.4	0.3	0 • 2	0.6	10 *	1.6	4 4 4	1."	• 0	0.0	0.0	27
28	0.0	4.4	0.2	0.2	0.6	13	1.6	4.6	1 +4	0.0	0.0	0.0	28
29	D. 0	7.02	0.4	0.2	0.6	12	1 • 6	4 . 7	1.0		0.0	0.0	29
20	0.0	1.2	0.3	9.2		13	1.7	4 a 6	. 9	10 + 0	0.0	0.0	30
31	0.1		0.3	0.2		9.4		4.0		10.n	0.0		21
MEAN	0.0	0.7	0.3	1 - 1	0.4	2.9	12.6	4 . 0	2+1	C . 1	0.0	0.0	
MAX.	0.0	7.5	0.4	14.0	1.1	13.0	103	9.6	6	0.4	0.0	0.0	
MIN	0.0	0.0	0.2	0.2	0.2	0.3	1.3	1+1	4.7	71.00	» O	0.0	AC F
AC. FT.		43	18	70	2.2	177	750	280	187	40			pac s

E ~ ESTIMATEO

NR — NO RECORD

• DISCHARGE MEASUREMENT OR

OBSERVATION OF FLOW MADE THIS DAY

= E AND R

MEAN	C	MAXIML	I M.)		MINIM	U M		
DISCHARGE	DISCHARGE	DAGE HT	MD	DAY	TIME	DISCHARGE	DAGE HT	MO	DAY	TIME
2.1	174	4.65	4	1	1200	0.0		1.0	1	0000

1552

	LOCATION	4	MA	XIMUM DISCH	IARGE	PERIOD 0	F RECORD		DATU	M DF GAGE)
LATITUDE	LONGITUDE	1 4 SEC T & R		OF RECOR	0	OISCHARGE	GAGE NEIGHT	PE	100	ZERO	DEF
LAIIIIOUE	LONGITUDE	S. B. B. B. M.	CFS	GAGE HT	DATE	T OIDEITAKOE	ONLY	FROM	TO	GAGE	OATUM
34* 18.41	117° 18.41	NE32 3N 4W	2750	5,90	2/12/62	Jan 61-Date	Jan 61-Date	1/61 2/62	1/62	2.80	U.S.G.S. U.S.G.S.

Station is located 2 miles NE of Cedar Springs on left bank of West Fork of Mojave River at State Highway 118 Crossing.

Drainage area is 19.8 square miles.

TABLE B-5 DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECONO)

1	WATER YEAR	STATION NO.	STATIC	N N	IAME									
	1964	V92250	E.F.	OF	WEST	FORK	OF	THE	MOJAVE	RIVER	ABOVE	CEDAR	SPRINGS	

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	2.8	0.7	1.5	0.9	0.6	37 •	4.4	0.8	0.1	0.0	0.0	$\lfloor 1 \rfloor$
2	0.1	0.4	0.7	0.5	r.9	0.9	27 *	4.4	0.8	0.1	0.0	0.0	2
3	0.0	0.4	0.7	0.5	0.8	0.7	16 •	4 • 6	0.8	0.1	0.0	0.0	3
4	0.1	0.4	0.8	0.5	0.8	C • 6	10	4.9	0.8	0.1	0.0	0.0	4
5	r.1	0.4	0.6	0.5	0.8	0.6	8.5	5.2	0.7	0.1	0.0*	0.0	5
6	0.1	0.8	0.7	n.4	n.8	0.6	7.6	6.8	0.7	0.1	0.0	0.0	6
7	0.1	0.7	0.7	0.5	0.8	0.6	6 • R	6.6*	^.7	0.1	0.00	0.0	7
8	0.1	0.5	0.7	0.4	0.7	0.6	6.6	6.2	0.8	2.0	0.0	0.00	8
9	C+1	0.4	0.9	0.4	0.7	0.5	6.2	5.3	1.2	5.7	0.0	0.0	9
10	0.1	0.4	0.9	^•5	0.6	0.5	6.1	5.1	0.7	6.5	0.0	0.0	10
11	0.1	0.4	0.7	0.4	0.7	0.5	6.1	4.5	0.7	6.7	0.0	0.0	11
12	0.1	0.4	0.7	2.4	n • 8	C+6	5.6	4.0	0.6	6.7	0.0	0.0	12
13	C+1	0.4	0.7	1.4	0.7	0.6	5.1	3.5	0.5	3.6	0.0	0.0	13
14	0.1	0.4	0.6	0.4	0.7	0.6	5.0	3 • 1	0.5	0.2	0.0	0.0	14
15	0.1	1.1	0.6	C • 4	0.6	0.5	4 . 8	2 • 8	0 • 4	0.1	0.0	0.0	15
16	0.3	1.1	0.6	0.4	0.7	0.4	4.5	2.4	0 4 4	0.1	0.0	1.5	16
17	0.8	0.7	0.6	0.4	0.7	0.4	4.6	2.2	0.4*	0.0	0.0	4.8	17
18	1 + 1	0.6	0.6	0.4	0.6	C • 4	4.6	1.9	0.4	0.0	0.0	5.5	18
19	0.5	0.6	0.5	C.4	0.6	C • 4	5.5	1.90	0.4	0.0	0.0	2.6	19
20	7.4	6.10	0.5	0.4	0.6	0.4	4.6	2.0	0.4	0.0	0.0	0.0	20
21	0.4	1,9	0.5	5.2*	0.6	C.4	4.6	1.5	0.3	0.0*	0.0	0.0	21
22	0.3	1.4	0.5	4.3	0.6	0.5	4.6	1.4	0.3	0.0	0.0	0.0	22
23	0.2	1.2	0.5	2.1	0.6	0.8	4.6	1.4	0.2	0.0*	0.0	0.0*	23
24	0.9	1.1	0.5	1.5	0.6	C . P	4.9	1.3	C • 2	0.0	0.0	0.0	24
25	n.a	1.0	0.5	1.3	0.6	1.0	4.4	1 • 2	0.5	0.0	0.0	0.0	25
26	0.3	0.9	0.5	1.2	0.6	1.3	4.0	1.2	C+1	0.0	0 • 0	0.0	26
27	1.2	0.7	0.5	1.1	0.6	1.7	4.2	1.1	0.1	0.0	0.0	0.0	27
28	0.2	0,7	0.5	1.1	0.6	2 . 3	4.2	1+1	0.1	0.0	0.0	0.0	28
29	1.9	0.7	0.5	1.0	0.7	2.9	4.2	1.1	0.1	0.0	0.0	0.0	29
30	4.2	€.7	0.5	1.0		3.3	4.4	0.9	0.1	0.0	0.0	0.0*	3D
31	4.5		0.5	0.9		4.1		0.9		0.0*	0.0*		31
MEAN	0.6	1.0	0.6	0.9	0.7	1.0	7.5	3.1	0.5	1.0	0.0	0.5	MEAN
MAX.	4.5	6.1	0.9	5+2	0.9	4.1	37∙∩	6.8	1.2	6.7	0.0	5.5	MAX.
MIN.	0.0	0.4	0.5	0.4	0.6	0.4	4.0	0.9	0.1	0.0	0 + 0	0.0	MIN.
AC FT.	25	58	36	5.8	40	60	449	188	29	64		29	AC FT

E — ESTIMATED

NR — NO RECORD

• DISCHARGE MEASUREMENT OR

OBSERVATION OF PLOW MADE THIS DAY.

= E AND R

					_						
MEAN		MAXIMU	M			١.		MINIA			
DISCHARGE	DISCHARGE	GAGE HT.	мо	DAY	TIME	1	DISCHARGE	GAGE H	MO	DAY	TIME
1.4	64.0	3.91	4	1	1100		0.0		110	1	1810
)					,	ľ					

-	TOTAL	
Г	ACRE FEET	I
	1047	l

	LOCATION	N	МА	XIMUM DISCH	ARGE	PERIOD C	F RECORD		DATUA	OF GAGE	
	LONGITUDE	1.4 SEC T & R		OF RECOR	0	DISCHARGE	GAGE NEIGHT	PER	100	ZERO	REF
LATITUCE	LONGITUDE	S.B.B.B.M	CFS	GAGE HT.	DATE	DISCHARGE	ONLY	FROM	TO	GAGE	DATUM
34° 16.3'	117° 17.5'	SW10 2N 4W	486	4.85	3/31/65	Mar 61-Date	Mar 61-Date	3/61	10/61	1.80	U.S.G.S.

Station is located 2.2 miles east of Cedar Springs on the right bank of the East Fork of the West Fork of Mojave River.

Drainage area is 11.5 square miles.

TABLE B-5 DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO	STATIC	NAN NA	RE.							
1964	V92300	nFST	FORK	OF	THE	MOJAVE	RIVER	ABOVE	EIAR	SPRINGS	

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	DAY
1	0.00	^.0*	0.0	0.0	1,4	• 2	12 •	0.9	. 7	.0	0.0	0.0	1
2	0.1	0.0	0.0	0.0	0.4	0.3	8.8*	0.8	1.3	0.0	0.0	0.0	2
2	٥.	0.0	0.0	0.7	0.4	0.2	4.50	0.8	7.3	0.0	0.0	0.0	3
4	0.0	0.0	0.0	0.0	0.4	0.2	3.2	0.8	1,2	5.0	0.0	0.0	4
5	2.2	0.0	0.0	0.0	0.3	0.2	2 • R	^ • 8		1.0	0.00	0.0	5
6	0.0	0.0	0.0	0.0	0.3	(• 2	2 . 4	1.	. ,	1 a 1	0.0	0.0	4
7	0.0	6.0	0.0	.0	0.3	f • 2	2.0	2.41	1 + 2	T.O	0.0*	0.0	7
8	• 0	0.0	0.0	1.0	0.3	0.2	1.9	1.3	+3	7.0	0.0	0.04	8
9	0.0	0.0	0.1	0.0	0.3	0.2	1.9	1 + 4	. 5	The On I	0.0	0.0	9
10	^•^	0.0	r+1	0.0	0.43	/*•2	`.5	± ± 4s	20.43	C.O	0.0	0.0	10
11	0.1	0.0	0.1	0.0	0.3	0.2	1.2	1.3	0.2	0.0	0.0	0.0	31
12	00	0.0	0.0	0.0	0.3	7 + 2	1.2	1.00	-0.2	0.0	0.0	0.0	12
13	0.0	0.0	0.1	C + 1	0+2	0.2	1.1	1.1	5.0	1.0	0.0	0.0	1.2
14	17.0	.0	0.0	C • 1	0.2	C+2	1.1	0.49	-1	3.5	^ e O	0.0	14
15	0.0	0.0	0.0	^+1	0.2	0+2	1+2	0+0	0.2	77.4	0 + 0	0.0	15
16	n.n	0.0	0.0	^+1	0.2	0.2	1.4	0.9	2	• ^	0.0	0.0	16
17	0.0	0.0	0.0	1+1	0.2	0.42	1.9	∩ . R	0.24	0.0	0.0	0.0	17
18	n.n	0.0	0.0	0+1	0.2	0.2	1+3	0.7	0.2	0.0	0.0	0.0	1.8
19	0.0	0.0	0.0	0+1	0.2	.2	1+2	C+6	0.1	0.0	0.0	0.0	19
30	0.0	7.2	0.0	^+1	0+2	0 + 2	1.2	0.6	1941	nan .	0.0	6.0	20
21	0.0	0.1	0.0	2.2	0.2	2 +2	1+1	0.6	C + 1	n_n	0.0	0.0	21
22	0.0	0.0	n.n	1.7	0.2	7.2	1 - 1	0.6	Gal.	0.0	0+0	0.0	22
23	0.0	0.0	0.0	r.7	0.2	0.4	1 - 1	10 + 6	(II. ^	0.0	0.0	0.00	22
24	0.0	0.0	0.0	^ o 5	0+2	0.4	1+1	7 .6	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.40	· 4	0.2	7.4	1+1	0.5	0.0	6.0	0.0	0.0	25
26	0.0	0.0	0.0	11/44	0.2	7.5	1.0	0.5	0.1	0.0	0.0	0.0	26
27	0.0	C.n	0.0	0.4	0.2	0.0	0.9	0.5	C	70.00	0.0	0.0	27
28	0.0	0.1	0.0	0.4	0.2	1.0	0.8	0.5	7 .2	0.0	0.0	0.0	28
29	0.0	1 • 1	0.0	0 = 4	0.2	1.2	0.8	0.4	0.+3	9.0	0.0	0.0	29
30	0.0	0 • 1	0.0	0.4		1.5	1.0	1 4	9.1	0.0	0.0	0.04	30
21	0.0		0.0	3.4		1.9		0.3		0.0.	0.0.		21
MEAN	0.0	0.0	0.0	0.2	0.3	0.4	2 • 1	0.8	0.2	0.0	0.0	0.0	MEAN
MAX	0.0	.2	0.1	1.7	0.4	1.0	12 an	1 • 4	0.5	r.n	0.0	0.0	MAX.
MIN	0.0	1.0	0.0	0.0	0.2	0.2	0.8	0.3	0.0	0.0	0.0	0.0	
AC FT		1	1	13	15	25	126	49	11				AC FT

E - ESTIMATEO

NR - NO RECORO

- OISCHARGE MEASUREMENT OR

OBSERVATION OF FLOW MADE THIS DAY

= E AND R

MEAN		MAXIML	M)		MINIM	U M		
DISCHARGE	DISCHARGE	GAGE HT	MO	DAY	TIME	DISCHARGE	GAGE HT	MO	DAY	TIME
0.3	16.0	4.42	4	1 1	1800	0.0		1.0	1	0000

1	ACRE	PERT
		240

	LOCATION	٧	MA	XIMUM DISCH	ARGE	PERIOD D	F RECORD		DATU	M OF GAGE	
		1 4 SEC T & R		OF RECOR	0	DISCHARGE	GAGE HEIGHT	PEF	100	ZERO	REF
LATITUDE	LONGITUDE	S.B. B B.M.	CF5	GAGE HT	DATÉ	OISCHARGE	ONLY	FROM	TO	GAGE	DATUM
34* 17.1*	117° 22.51	SW2 2N 5W	337	5.55	2/12/62	Feb 61-Date	Feb 61-Date	2/61		3.21	uc

Station is located 2.6 miles west of Cedar Springs on the left bank of the West Fork of Mojave River.

Drainage area is 3.2 square miles.

TABLE B-5 DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECONO)

WATER YEAR	STATION NO.	STATION NAME
1964	32330	ELIZABETH LAKE CANYON CREEK ABOVE CASTAIC

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0.0	0.0	0.0	0.0	0.6	1.0	7.1	1.0	0.0	0.0	0.0	0.0	1
2	0.0	0.0	0.0*	0.0	0.6	1 • 1	5 • 3	1 • 3	0.0	0.0	0.0	0.0	2
3	0.0	0.0	0.0	0.0	0.6	1 • 1	3.9	1.9	0.1	0.0	0.0	0.0	3
4	0.1	0.0	0.0	0.1	0.5	1.0	3 • 2	2 . 4	0.0	0.0	0.0	0.0	4
5	0.0	0.0	0.0	0 • 1	0.5	1.1	2.9	2 • 9	r.0	0.0	0.0	0.0	5
6	9.0	0.0	9.0	€+1	0.5	1.1	2.5	4.1	0.0	0.0	0.0	0.0	6
7	n.n	0.0	0.0	0.5	0.5	5 • 0	2.0	4.5	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	0.6	0.5	7.1	1.8	3.3	0.0	0.0	0 • 0	0.0	8
9	0.0	0.0	0.1	0.6	0.5	7 • 1	1 • 6	2 • 4	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.1	C • 6	0.5	6.8	1.4	1.8	0.0	0.0	0.0	0.0	10
11	0.0	0.0	9.1	0.6	0.5	6 • B	1.2	1 • 4	0.0	0.0	0.0	0.0	11
12	0.0	0.0	9 • 1	0.6	0.5	8.0	1.1	1.2	0.0	0.0	0 • 0	0.0	12
13	1.1	0.0	0.1	C + 6	0.5	8 • 5	0.9	1 + 1	0.0	0.0	0.0	0.0	13
1A	n.n	0.0	0.1	€ • 7	0.5	7.8	0.9	1 + 1	0.0	0.0	0 • 0	0.0	14
1.5	0.40	0.1	0.1	0 • 8	0.5	7.5	0 • R	0 + 6	0.7	0.0	0 • 0	0.0	15
16	0.0	0.0	0.0	0.7	0.5	7.5	0.8	0.5	0.0	0.0	0.0	0.0	16
17	T.0	0.0	0.0	0.6	0.5	7.5	0.8	0 • 4	0.0	0.0	0 • 0	0.0	17
18	0.0	0.0	0.0	0.3	0.5	7.3	0.9	0.3	0.0	0.0	0.0	0.0	18
19	0.0	9.0	0.0	0.1	0.6	7.1	1.1	0.2	0.0	0.0	0.0	0.0	19
20	0.0	C+6#	0.0	0.1	0 + 8	6+8	1.1	0.1	0.0	0.0	0.0	0.0	20
21	0.0	2.0	0.0	3 • 8	0.9	8.0	0.9	0.1	0.0	0.0	0.0	0.0	21
22	0.0	0,7	0.1	17	0.9	12	0.9	0.1	0.0	0.0	0.0	0.0	22
23	0.0	0.2	0.1	4.9	1.0	17	1.0	0.1	0.0	0.0	0.0	0.0	23
24	0.40	0.1	0.1	2.9	1.0	17	0.9	0.2	0.0	0.0	0.0	0.0	24
25	0.0	6.1	0+1	2 • 1	1.0	14	0.5	0.42	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.1	1+5	1.0	13	0.9	0.2	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.1	1 • 3	1.0	12	0.7	0.1	0.0	0.0	0.0	0.0	27
28	P+1	0.0	0.0	1 • 1	1.0	12	1.1	0.1	0.0	0.0	0.0	0.0	28
29	P+1	0.0	0.40	0.9	1.0	11	1.3	0.1	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.8		11	1+1	0.0	0.0	0.0	0.0	0.0	30
31	0.0		0.0	0.7		9.2		0.0		0.0	0.0		31
MEAN	0.0	0.1	0.0	1.4	0.7	7.0	1.7	1.1	0.0	0.0	0.0	0.0	MEAN
MAX.	2 - 3	2.0	0 . 1	17.0	1.0	17.0	7+1	4.5	0.0	0.0	0.0	0.0	MAX.
MIN	0.0	0.0	0.0	0.0	0.5	1.0	0.5	0.0	0.0	0.0	0 • 0	0.0	MIN
AC FT.		7	3	8 9	39	483	100	67					AC FT

E — ESTIMATED

NR — NO RECORD

• — DISCHARGE MEASUREMENT OR
OBSERVATION OF FLOW MADE THIS DAY.

□ E AND R

MEAN (MAXIML	M				MINIM	U M		
DISCHARGE 1 • 1	DISCHARGE 44+0	GAGE HT 2+99		DAY 22	TIME 0510	DISCHARGE 0 • 0	GAGE HT	10	OAY 1	TIME 0000

TOTAL ACRE FEET 788

[LOCATIO:	N	AM.	XIMUM DISCH	IARGE	PERIOD C	F RECORD		DATUM OF GAGE			
LATITUDE	LATITUDE LONGITUDE 1/4 SEC. T & R		OF RECORD			DISCHARGE	GAGE HEIGHT	PERIOD		ZERO	REF.	
LAIIIODE	LONGITUDE	S. B. B. & M.	CFS	GAGE HT.	DATE	DISCHARGE	ONLY	FROM	TO	GAGE	DATUM	
34° 33.7°	118° 34.2'	SW34 6N 16W	1410	5.20	2/11/62	Jan 62-Date	Jan 62-Date	2/62	1/63	1.82	Local Local	

Station is located 3.9 miles north of intersection of Castaic Canyon Road and Elizabeth Lake Canyon Road on left bank of stream at Canyon Christian Camp.

Drainage area is 45.7 square miles.

TABLE B-5 DAILY MEAN DISCHARGE (IN CUBIC FEET PER SECOND)

WATER YEAR STATION NO STATION NAME CASTATC CREEK AN VE TOR VA RANGH 1964 32360

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	0. •	0.0	7.0	1.7	1.7	. 0	3,8	0.2	7. *	5.0	0.0	0.0	1
2	0	0.0	0.0	1.0	^	1.0	2 . 1		^ .	.0	0.0	0.0	2
3	^ •	^.e	0.0	3.0	^ a n	1.0	1.4	~ + 1		0.0	0.0	0.0	2
4	7.	1 .0	0.1	3.0	0.0	.∩	C.A	2.0	^ .	200	0.0	0.0	A
5	7.0	□•n	0.0		1.0		8.	1.3		**	0.0	0.0	5
6	7.0	0.0	0.0	3.0	147	4.	0.6	1.0	0.9	• 0	0.0	0.0	
7	2.40	4.0	2+0	0.0	0.0	0.	0.3	a B	1.0	• 0	0.0	0.0	7
8	7.0	4.0	0.0	0.0	7.0	0.	+2	" a 4	0.0	• 0	0.0	0.0	
9	2 • 2	0.0	0.0	3+0	0.0	0.0	0.1	^ e 2	0	0.0	0.0	0.1	9
10	0.0	0.0	0.1	7.0	0.0	0."	0.2	^ + 1	^ • n	0.0	0.0	0.0	10
11	2.1	1.0	0.0	0.0	0.0	0.0	0 • 1	2.1	2.0	1.0	0.0	0.0	11
12	0.0	0.0	0.0	P • 0	0.0	2.0	0.0	2.1	1.0	0.0	0 • 0	0.0	12
13	0.0	0.0	0.0	<u>^</u> +0	0.0	2.1	0.0	II • 1	1.0	^ • O	0.0	0.0	13
14	0	0.0	0.0	0.0	9.9	Ca.	1.0		4.0	0.0	0.0	0.0	14
15		473	'' øD	^•^	1.0	0.0	10140		-0.7	0.0	0.0	0.0	15
16	0.1	E.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
17		.0	0.0	0.0	0.0	4.0	0.0	1	0.0	0.0	0.0	0.0	17
18		0.0	0.0	0.0	2.0	3.0	[+1	7.0	.77	0.0	0.0	0.0	1.0
19	2.0	0.0	0.0	. O	7.7	7.0	2 • 5	0.0	0	(• n	1.0	0.0	1.9
20		22 *	(, (C.n	₾.	0.1	(e)	11.0	0.40	0 +0	0.0	20
21	0.1	1.46	0.0	3.4	0.11	2.0	C+1	1.0	2.60	^ • 0	0.0	0.0	21
22	0.0	0.1	0.0	50	0.0	0.4	C+2	•1	1.1	0.0	0.0	0.0	22
23	0.0	•0	0.0	0.8	0.0	0.4	0.2	0.0	0.40	Can	0.0	0.0	22
24	0.1	0	T.n	• 2 •	0.0	C+1	0.2	0.0	• 0	n • 0	0.0	0.0	24
25	0.0	^*0	0.0	0.0	0.0	^ • ^	0.2	7.	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	10 - 1		0.0	0.0	0.0	0.0	26
27	0.0	0.0	6.0	0.0	0.0		0.1	7.0	0.0	• ^	1.0	0.0	27
28	0.0	0.0	0.0	0.40	∩•l0	0.0	0.2	0.1	100	0.0	0.0	0.0	26
29	0+0	0.0	C+U	^ • n	0.0	0.0	7.7	0.1		0.0	0.0	0.0	29
30	0.0	0.0	0.0	^•n		^ ^ ^	0.2	0.	2.0	1.0	0.40	0.0	20
31	0.00		0.0	^.0		0.3		^ * =		~.0	0.0		21
MEAN	0.0	0.8	0.0	0.8	0.0	0.0	0.4	7.1	2.0	0.0	0.0	0.0	MEAN
MAX	0	22.0	0.0	21.0	0.0	0.4	3.8	1.0	6.0	0.0	0.0	0.0	MAX.
MIN		47		48	100	2	0.0	C . 7	0.0	0	^ + 0	0.0	MIN
AC FT		4 "		44		/	20						AC FT

E — ESTIMATED

NB — NO RECORD

- DISCNARGE MEASUREMENT OR
OBSERVATION OF FLOW MADE THIS DAY.

= E AND R

MEAN		MAXIMU	M		_ >		MINI	MI	J M		
DISCHARGE	DISCHARGE	DAGE HT	MD	DAY	TIME	DISCHARGE	GAGE	HT	MD	DAY	TIME
C. 7	111	3.17	1	22	0430	0.0			10	1	0000

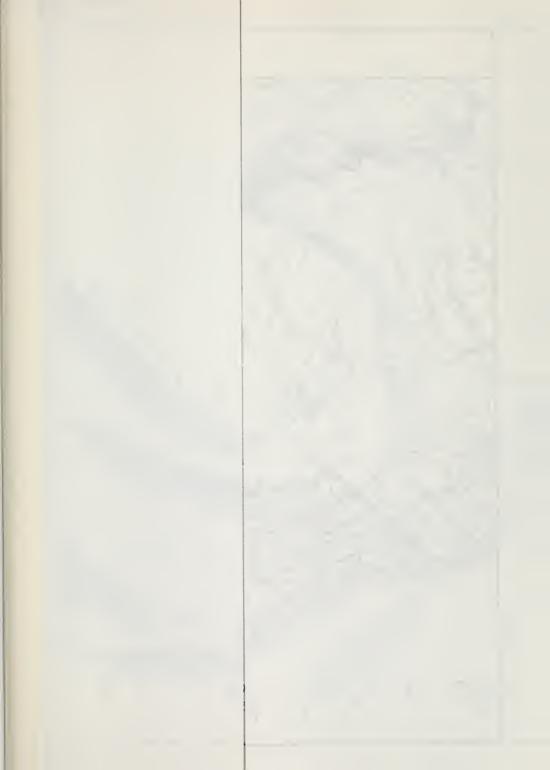
TO	TAL	_
ACRE	FEET	
	13/	٦

	LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE			
		1 4 SEC T & R	OF RECORO			DISCHARGE	GAGE HEIGHT	PERIOD		ZERO	REF		
LATITUDE	LONGITUDE	S.B.B.BM	CFS	GAGE HT	OATE	O/SCHAROL	ONLY	FROM	TO	GAGE	OATUM		
34* 36.7	116* 39.8*	NE22 6N 17W	3790	5.35	2/11/62	Jan 62-Date	Jan 62-Date	3/62	2 62	2.10	Local Local		

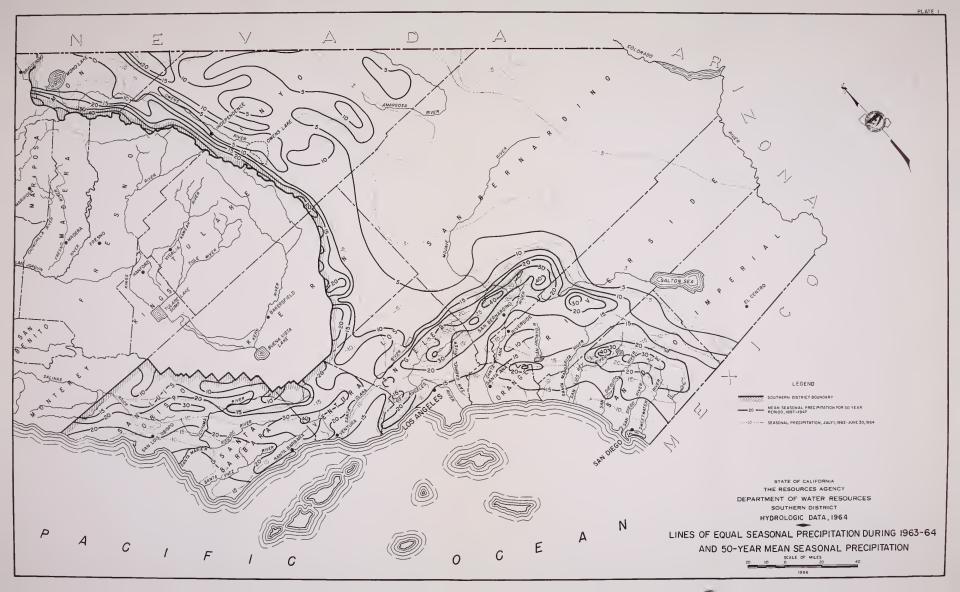
Station is located 6.7 miles west of Elizabeth Lake Canyon Road on Castaic Canyon Road on left bank.

Drainage area is 65.0 square miles.

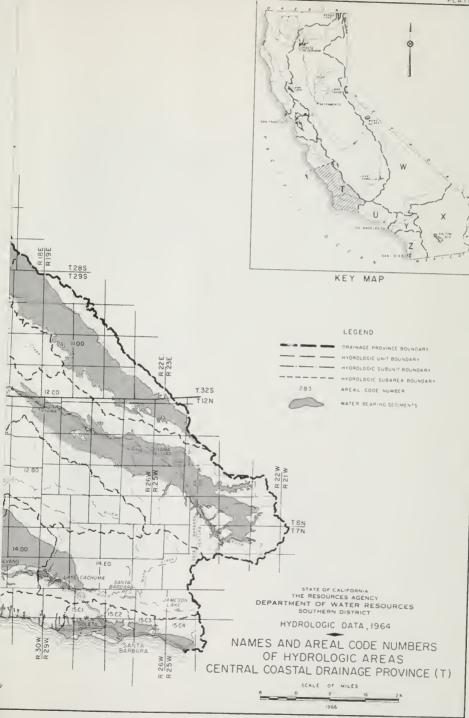














AREAL DESIGNATIONS
HYDROLOGIC UNITS: SUBUNITS AND SUBAREAS

"ENTRAL COASTAL GRAINAGE PROVINCE

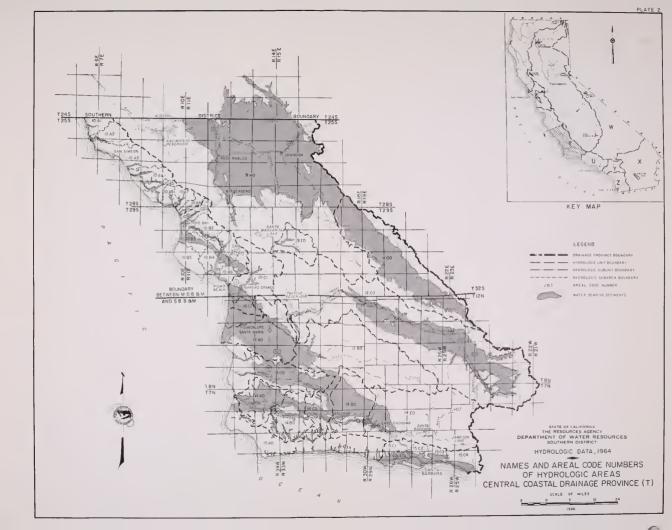
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1-10.46 CARRIZO PLAIN HYDRO UNIT

SANTA NARIA-CUYAMA NYORO UNIT SANTA HARIA M+DRU SUBUNIT SISQUOC M+DRO SUBUNIT CUYAMA YALLEY MYORO SUBUNIT

T-14.00 T-14.80 T-14.80 T-14.00 T-14.00 T-14.00

T-15.00 T-15.40 T-15.C0 T-15.C1 T-15.C2 T-15.E3 T-15.C4

SANTA BARBARA (H IS MYDRO UNIT SAN MIGUEL ISLAMD MYDRO SUBUMIT SANTA ROSA ISLAMO MYDRO SUBUMIT SANTA COUZ ISLAMO MYDRO SUBUMIT

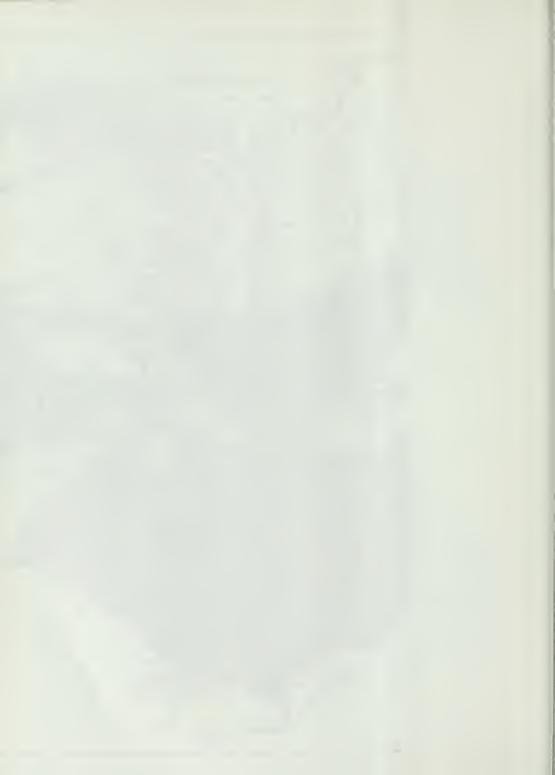


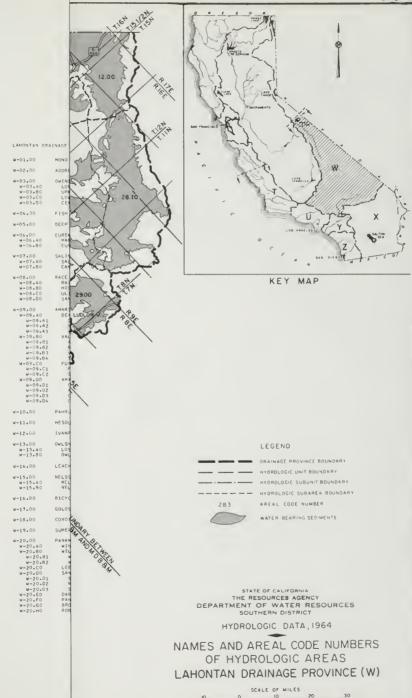






KEY MAP - Ostinas Physial I ... 410 to 100 to 10 MATERIAL E MEN THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES HYDROLOGIC DATA, 1964 NAMES AND AREAL CODE NUMBERS OF HYDROLOGIC AREAS O C E A N LOS ANGELES DRAINAGE PROVINCE (U)

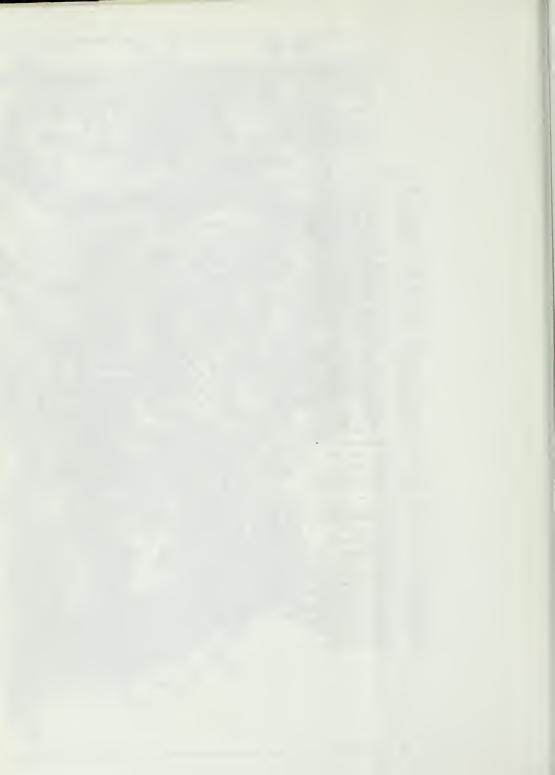


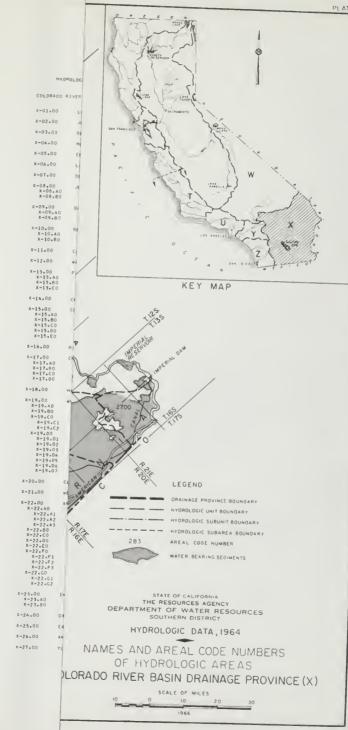




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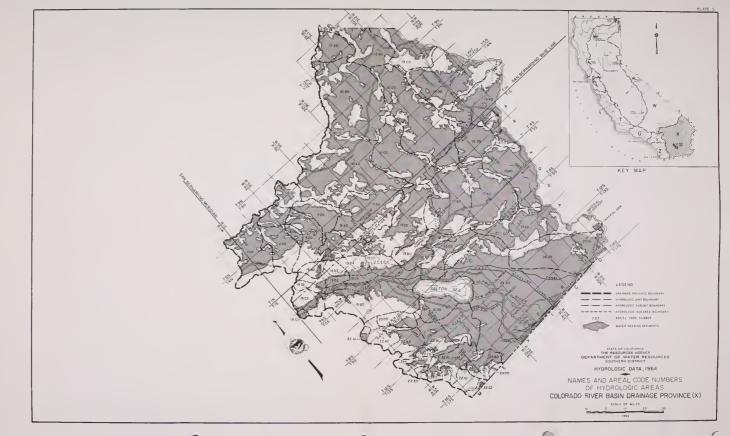






AREAL DESIGNATIONS
HYDROLOGIC UNITS: SUBURITS AND SUBAREAS

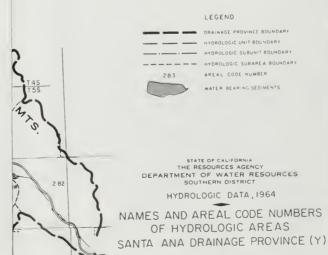
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LUCERNE HIDEO UNII
X-02.00
                                                                                                                BESSEAGR HTGBD UNI
                                                                                                                JOSHNA TREE HYDRO UNIT
WARREN HYDRO SUBUNIT
COPPER MOUNTAIN HYDRO SUBUNIT
                                                                                                                CALE HYDRO UNIT
THEMTYNINE PALMS HYDRO SUBURIT
SALE HYDRO SUBURIT
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TENELLISES MYSSO UNIVERSITY 
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VALCETTO MYSSO UNIVERSITY 
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1-24-00
                                                                                                            DAVIES HYDED UNIT
2-27-D0 FUMA HYDRO UNIT
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KEY MAP





AREAL DESIGNATIONS HYDROLOGIC UNITS SUBUNITS AND SUBAREAS

Service of the property of the

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KEY MAP

LEGEND



STATE OF CALIFORNIA THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES SOUTHERN DISTRICT

HYDROLOGIC DATA, 1964

NAMES AND AREAL CODE NUMBERS OF HYDROLOGIC AREAS SAN DIEGO DRAINAGE PROVINCE (Z)





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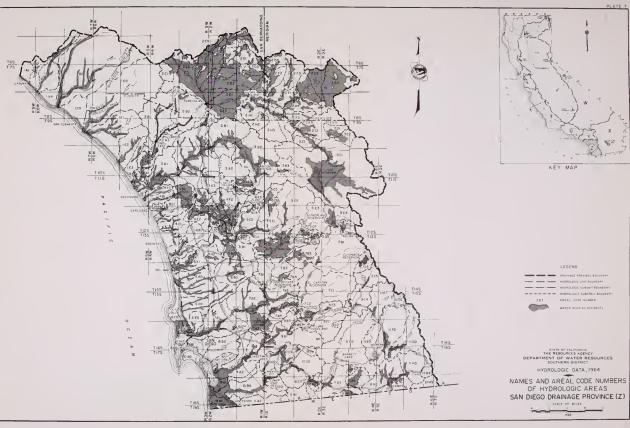
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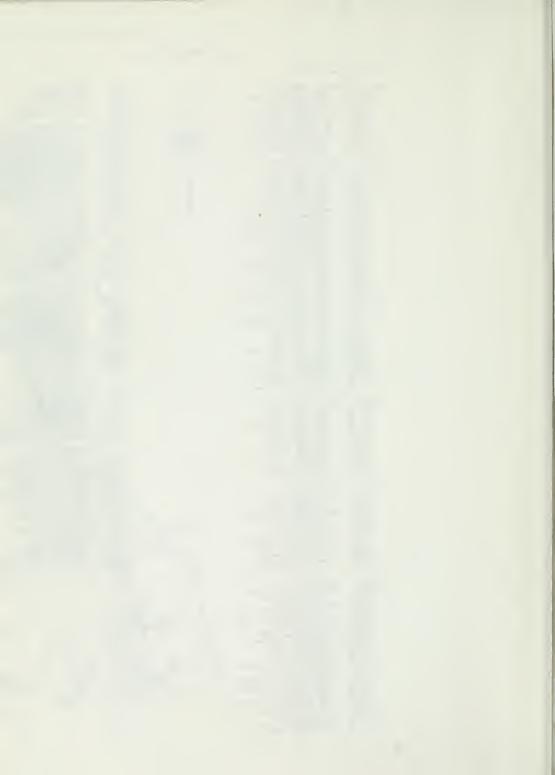
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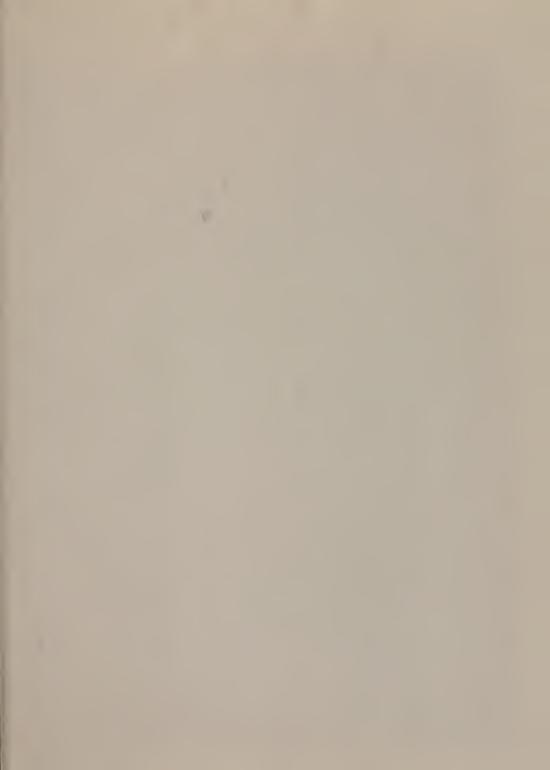
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